

Final Report

Using the Essential Nutrition Actions Approach to Improve the Nutritional Practices of Women and Children at Scale in Antananarivo and Fianarantsoa Provinces of Madagascar:

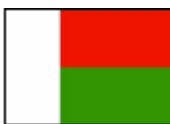
Results and Trends 2000 to 2005



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- the JSI Madagascar Team; and, most importantly,
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List of Acronyms

BFHI	Baby Friendly Hospitals Initiative
BASICS	Basic Support for Institutionalization of Child Survival
BCC	Behavior Change Communication
CF	Complementary feeding
<i>Commune</i>	Geopolitical division for districts
CSB	<i>Centre de Santé de Base</i>
DHS	Demographic and Health Survey
EBF	Exclusive Breastfeeding
ENA	Essential Nutrition Actions
EPI	Expanded Program of Immunization
<i>Fokontany</i>	Geo-political division for central villages
<i>Gazety</i>	Health newsletter
GAIN	<i>Groupe d'Actions Intersectoriel pour la Nutrition</i> (Intersectoral Committee on Nutrition)
IEC	Information, Education, Communication
IMCI	Integrated Management of Childhood Illnesses
JSI	<i>Jereo Salama Isika</i> (John Snow, Inc.)
LAM	Lactational Amenorrhea Method
LINKAGES	USAID-funded project in breastfeeding and nutrition
MOH	Ministry of Health
<i>Patsa</i>	Small, dried shrimp
PNSAN	<i>Programme National de Sécurité Alimentaire et Nutritionnelle</i>
RAP	Rapid Assessment Procedures
SEECALINE	World Bank Community Nutrition Program
SNUT	<i>Service de la Nutrition</i>
SSD	<i>Service de Santé de District</i>
TICF	Timely Initiation of BreastFeeding
USAID	United States Agency for International Development
<i>Zaza Salama</i>	Child health card

Executive Summary

Introduction

The Academy for Educational Development's LINKAGES Project has implemented its community level activities in Madagascar through a behavior change communication strategy aimed at improving nutritional practices related to infant and young child feeding, women's nutrition, and micronutrients. With its many field partners in the government and NGO community, LINKAGES focused its technical support on health workers, community groups, and family members.

Although LINKAGES began working in Madagascar at the national policy level in 1997, it only became operational at the community level in late 1999 through its field partnership with Jereo Salama Isika (JSI), an USAID funded integrated child survival and reproductive health project, managed by John Snow International, which worked with communities through the government's district health teams. Working in partnership with JSI and district health teams as well as with an array of non-governmental organizations (NGOs), local university groups, and donor agencies, LINKAGES promoted the Essential Nutrition Actions (ENA) approach, particularly aspects of infant and young child feeding, women's nutrition during pregnancy and lactation in addition to micronutrient nutrition related to vitamin A, iron, and iodine.

A unique aspect of the LINKAGES and JSI field partnership was that three key technical areas—nutrition, child survival, and reproductive health—were integrated at the service delivery level in health facilities as well as in communities. This resulted in the creation of strong program synergies in capacity building, implementation, community mobilization, as well as monitoring and evaluation. The impending closure of the JSI project forced LINKAGES by late 2002 to scale back the intensity of its assistance to communities, which had been through its direct assistance to district health teams. Instead, LINKAGES took a less intensive approach that re-directed support to members of provincial health teams. These provincial teams in turn trained staff of district health teams and NGO staff who, thereafter, assisted community members.

Summary of Results

This report presents the major results and trends achieved at the community level by LINKAGES and its partners over 2000-2005 in improving nutritional behaviors related to infant and young child feeding, micronutrients and women's nutrition. The following two tables show key results on ENA indicators. The first table shows results from six districts, referred to as Project Districts or PDs, in which LINKAGES initiated activities in early 2000 to take to scale the community approach for ENA. The second table shows similar ENA indicators from 2 districts in which LINKAGES built on the earlier foundation of the BASICS I project, active in Madagascar from 1996-1998, where aspects of the ENA and the community Behavior Change Communication (BCC) approach were piloted; these are referred to as Original Districts or ODs. In total, these eight districts (total population coverage of 2.26 million) represent the core of six years of LINKAGES' assistance to improve nutritional practices at the community level.

In addition, this report presents key data on reproductive health related to breastfeeding as well as immunization collected in this final assessment. These interventions, originally promoted by LINKAGES field partner, JSI, were subsequently included in the ministry of health's activities in these districts.

Major Findings
Project Districts¹
(Initiated by LINKAGES in early 2000)

Indicator	Baseline 2000	End-line 2005	Degree of Significance
Exclusive breastfeeding to 6 months	42% 135/319	70% 350/500	p < 0.001
Timely initiation of breastfeeding (within 1 hour of birth)	32% 190/600	68% 339/500	p < 0.001
Infants 0-5 months breastfed 10 or more times per day	67% 215/320	86% 429/500	p < 0.001
Infants 6-11 months fed correct number of meals per day	78% 218/280	82% 420/515	n.s.
Infants 12-23 months fed correct number of meals per day	62% 374/600	67% 500/745	n.s.
Continued breastfeeding of infants 18-23 months	52% 149/286	71% 238/335	p < 0.001
Sick infants (0-5 Months) breastfed more than usual during illness	4% 4/89	13% 14/109	p < 0.05
Sick infants (6-23 Months) breastfed more than usual during illness	11% 36/338	28% 139/498	p < 0.001
Infants having received Vitamin A (12-23 months)	85% 512/600	89% 666/745	n.s.
Women with children 0-5 months saying they use Lactational Amenorrhea Method (LAM)	2% 7/318	24% 119/500	p < 0.001
Mother's increased eating during lactation	62% 199/320	74% 370/500	p < 0.001
Mother's increased eating during pregnancy	51% 162/320	55% 276/500	n.s.
Mother received iron during pregnancy	28% 152/546	76% 363/476	p < 0.001
Mother received vitamin A within 2 months of delivery	17% 53/319	54% 268/500	p < 0.001

¹ In early 2000 LINKAGES took the pilot approach developed originally by the BASICS I project in two districts (shown in next table) to scale in the six districts which are shown in this table: Ambohimahasoia, Ambositra, Antananarivo Nord, Antananarivo Sud, Antsirabe I and Fianarantsoa (covering a total population of 1.39 million).

Major Findings Original Districts²

(initiated by BASICS I Project in 1996 and later subsumed under LINKAGES support in early 2000)

Indicator	Baseline 1996	End-line 2005	Degree of Significance
Exclusive breastfeeding to 6 months	48% 176/320	76% 243/320	p < 0.001
Timely initiation of breastfeeding (within 1 hour of birth)	21% 78/370	71% 227/320	p < 0.001
Infants 0-5 months breastfed 10 or more times per day	31% 112/362	88% 280/318	p < 0.001
Infants 6-11 months fed correct number of meals per day	n/a	86% 504/583	n/a
Infants 12-23 months fed correct number of meals per day	n/a	55% 176/320	n/a
Continued breastfeeding of infants 18-23 months	49% 177/361	72% 102/141	p < 0.001
Sick infants (0-5 Months) breastfed more than usual during illness	n/a	11% 6/55	n/a
Sick infants (6-23 Months) breastfed more than usual during illness	n/a	33% 79/238	n/a
Infants having received Vitamin A (12-23 months)	n/a	93% 298/320	n/a
Women with children 0-5 months saying they use LAM	n/a	12% 39/320	n/a
Mother's increased eating during lactation	37% 137/369	59% 187/319	p < 0.001
Mother's increased eating during pregnancy	n/a	39% 125/320	n/a
Mother received iron during pregnancy	6% 43/721	76% 231/304	p < 0.001
Mother received vitamin A within 2 months of delivery	10% 37/370	61% 195/320	p < 0.001

² These are the two districts of Fianarantsoa II and Antsirabe II (covering a total population of 870,000) in which the BASICS I project in 1996 piloted the community approach, which was later adapted and expanded by LINKAGES and JSI in both these two districts as well as in the additional six districts shown in the previous table.

Key findings from the previous two tables, in addition to results from further analysis carried out in the report, are noted as follows:

- **Early Initiation of Breastfeeding:** Large and rapid significant results were seen with improving early initiation of breastfeeding from 32% to 68% in PDs and from 21% to 71% in ODs (both with $p < 0.001$). Trend data indicate that a “one-off” behavior such as early initiation of breastfeeding can be maintained even when the intensity of the program at the community level diminishes, for example, when support to community activities was re-directed from the district through the provincial level.
- **Exclusive Breastfeeding:** Significant improvements were achieved in improving exclusive breastfeeding rates, with increases observed that were 1.5 times the original rate (from 42% to 70% in PDs and 48% to 76% in ODs; both $p < 0.001$). These increases occurred rapidly within the first year of field implementation. However, unlike a one-off behavior such as early initiation of breastfeeding, exclusive breastfeeding levels fluctuated with the intensity of the program and level of support to community activities. Although women maintained high levels of exclusive breastfeeding relative to baseline values, these levels tended to decrease when program intensity decreased. This is probably because exclusive breastfeeding is a more complicated behavior necessitating continued action over a longer period of six months.
- **Complementary feeding:** Complementary behaviors improved as well, particularly in reducing the percentage of mothers giving their infants complementary foods prior to 6 months, a major problem in the country. In addition, additional analyses of the trend data indicate that some improvements have been made in increasing dietary diversity, particularly for children 6-23 months who at the time of the end-line survey were consuming significantly more fish/shellfish ($p < 0.001$), fruits/vegetables ($p < 0.001$) and oils/fats ($p < 0.01$). These are all foods explicitly recommended in the messages promoted by LINKAGES and its partners. Feeding frequency, however, especially in infants older than 12 months remains low.
- **Continued breastfeeding:** Continued breastfeeding until 23 months also significantly improved, particularly in the 18-23 month old age group (from 52% to 71% in PDs and from 49% to 72% in ODs; both $p < 0.001$)
- **Nutritional Care of the Sick Child:** Although significantly more mothers breastfeed their children 0-23 months more during illness, from 4% to 13% for 0-5 month olds ($p < 0.01$) and from 11% to 28% in 6-23 months olds ($p < 0.001$), no improvement was seen for breastfeeding more after illness. In addition, no improvement was found in feeding sick children 6-23 months foods that are more complementary during and after illness.
- **Women’s Nutrition:** Significantly more mothers ate ‘more than usual’ during lactation, from 62% to 74% in PDs and 37% to 59% in ODs (both $p < 0.001$). However, no improvement was found in getting mothers to eat more during pregnancy.
- **Vitamin A Supplementation in Children 12-23 months:** High levels of vitamin A coverage were seen. This is most likely due to the national mass supplementation campaigns that occur twice each year. In LINKAGES project areas, levels reached 89% and 93% in the PDs and ODs, respectively. Both these levels are higher than the national level of 84% as measured by the DHS 2003-04 for this same age group of 12-23 month olds.
- **Post-partum Vitamin A:** The percentage of women receiving post-partum vitamin A supplementation increased significantly, from 17% to 54% in PDs and from 10% to 61% in ODs (both $p < 0.001$).
- **Iron/folate Supplementation during Pregnancy:** Large and statically significant increases were seen in the coverage of pregnant women with iron/folate supplements, from 28% to 76% in PDs and from 6% to 76% in ODs (both $p < 0.001$)

- ***Iodized Salt:*** The presence of iodized salt increased from 30% to 63% in ODs from the time of the baseline to the time of the end-line, with this most likely being the result of improved national distribution of iodized salt in markets across the country. At the time of the end-line survey, the level in PDs was 77%; however, no baseline data are available for comparison. The national level measured by the DHS 2003-04 was also 77%.
- ***LAM and Family Planning:*** The proportion of women with infants 0-5 months who reported they used Lactational Amenorrhea Method (LAM) increased from 2% to 24% in PDs ($p < 0.001$). Comparable data are not available in ODs.
- ***Source of ENA Messages and Contact Points:*** Overwhelmingly 'health workers' were named by mothers as the major source of information for all ENA messages. For example, 60% of mothers cited health workers as their source of information on exclusive breastfeeding, while 12% of mothers cited 'community workers', and 9% cited Poopy, the pop-singer and country ambassador for ENA. (NB: more than one source could be cited by a mother).
- ***Knowledge and Practice of ENA Messages:*** Correct knowledge of key ENA behaviors is very high, ranging from 80% to 94% for all the ENA messages listed. The only exceptions were for 'nutritional care of the sick children' (only 49% knew the correct message) and the frequency of vitamin A supplementation for children (only 52% knew the correct message). The greatest discrepancy between correct knowledge and practice is in the area of women's nutrition. Whereas most women, 80 and 94%, knew they should eat more during pregnancy and lactation, 80% and 94% respectively, only between 47% to 57% actually practiced these behaviors.
- ***When Mothers Heard Messages:*** Most of the ENA messages appear to be given at the appropriate time in the life-cycle, for example, messages on early initiation are given during ante-natal care and delivery, and messages on the feeding of the sick child are given during IMCI visits. However, it seems that there are still many missed opportunities for giving messages and counseling mothers, as over half of the time mothers do not hear the key messages relevant to their specific life-cycle needs.
- ***Child Growth:*** An analysis of anthropometric data was carried out on a sub-set of communities. While levels of nutritional stunting (low height for age) in children 6-23 months appear to have decreased, from 49% to 45%, this difference is not statistically significant.
- ***Immunization:*** Levels of fully immunized children remain high in project areas, 81-82%, and are much higher than the national DHS 2003-04 level of 53%. Similarly, the levels of BCG, DPT3 and measles coverage are higher than the DHS

Conclusion

The work undertaken by LINKAGES and its partners in Madagascar has resulted in significant improvements across most of the Essential Nutrition Action areas from infant feeding to micronutrients to women's nutrition. In addition, these improvements have occurred over a large population, over 2.26 million, and through an integrated approach that utilizes multiple program opportunities to provide the right nutrition advice to the right target audience at the right point in time. In addition, improvements were also seen related to reproductive health, as evidenced by the increased uptake of LAM.

Further analysis of the data published elsewhere³ also indicates that the approach taken by LINKAGES in Madagascar is highly cost effective. At a cost of \$30.77 per disability-adjusted life year (DALY), LINKAGES program in Madagascar to promote breastfeeding with the context of ENA compares favorably with other health interventions, \$14.50 for immunization, \$25.00 for family planning, and \$40 for integrated management of childhood illness. The

³ *Experience LINKAGES: Cost and Effectiveness*, Academy for Educational Development, November 2005

DALY level of \$30.77 is also well below the benchmark of \$100/DALY which is considered by the World Bank as the upper limit of cost effective programs in low income countries.

There are, however, still areas for improvement that warrant further attention by nutrition groups working in Madagascar. More work is needed to address the nutritional needs of sick children, with particular focus on increased breastfeeding following illness and increased complementary feeding both during and following illness. These behaviors appear to be very difficult to change, particularly the latter. Feeding sick children is difficult because of the anorexia that typically ensues when children fall ill. In addition, more attention is needed to promote women's nutrition, particularly improved feeding during pregnancy, an area where little progress has been made, either in Madagascar or elsewhere. The lack of progress seen in LINKAGES sites on improving women's nutrition is most likely the result of less attention being given to this topic as the primary focus was on breastfeeding and complementary feeding practices. Lastly, further work is needed to develop more effective messages and appropriate field strategies to improve complementary feeding which is a recognized to be a challenging area. More study is needed on the obstacles preventing mothers from adequately feeding the necessary types and amounts of complementary foods to their children 6-23 months. What is needed is information on the relative contribution of factors such as access, availability, and utilization issues, which in turn would inform future complementary feeding messages and field approaches.

Additional work is needed to improve the indicators to assess complementary feeding, as well as the nutritional care of the sick child and women's nutrition. The work undertaken by LINKAGES in Madagascar has helped to contribute to the knowledge base to develop better indicators, but more effort will be needed in the future to identify feasible and less subjective measurements.

I. Introduction

1.) Malnutrition in Madagascar

As shown in the DHS 1997, malnutrition was a critical public health issue in Madagascar, and was identified as an underlying cause of death in 54 percent of all children under five⁴. One Malagasy infant in ten died during the first 12 months, and one child in six dies before the age of five. Indicators of the levels of malnutrition in Malagasy women and children from the DHS 1997⁵ are shown below:

Children:

- At birth: 26% low birth weight
- Stunting in children < 5 years: 48%
- Underweight in children < 5 years: 40% underweight
- 3 years: 67% anemic
- 42% vitamin A deficient (2000 Vitamin A survey)

Women of Reproductive Age:

- 42% anemic
- 21% body mass index (BMI) below 18.5 kg/m²

Sub-optimal breastfeeding practices are acknowledged to be a major cause of infant mortality. The World Health Organization and Madagascar's National Health Policy recommend exclusive breastfeeding from birth to six months. During the first six months, rates of diarrhea and respiratory infections are lower among exclusively breastfed infants than among partially breastfed infants. In Madagascar according to the DHS 1997, only 50% of infants less than six months of age were exclusively breastfed. However, by the time of the DHS 2003-04, the level of exclusive breastfeeding had substantially increased to 67%.

The DHS 2003-04⁶ has shown little change in levels of child stunting and underweight:

Children:

- Stunting in children < 5 years: 47%
- Underweight in children < 5 years: 41% underweight
- 3 years: 76% anemic

Women of Reproductive Age:

- 46% anemic
- 19% body mass index (BMI) below 18.5 kg/m²

2.) Description of LINKAGES Presence in Madagascar

Addressing these serious malnutrition problems requires the commitment, resources, and collaboration of government, donor, and nongovernmental organizations (NGOs). The LINKAGES/Madagascar project is implemented by the Academy for Educational Development with the financial support of the United States Agency for

⁴ Madagascar *Profiles* Team 2000

⁵ Anthropometric data from 'Madagascar Nutrition Chartbook 2003': Demographic Health Surveys, Macro International

⁶ Ibid

International Development (USAID). With funding from the United States Agency for International Development (USAID), LINKAGES first began working with the Ministry of Health in Madagascar in 1997, and continued expanding its approach and coverage with new partners through to 2006

It is also important to recognize work that took place prior to this time, from which lessons were learned and certain approaches adapted and continued. From 1996 to 1998, the Ministry of Health and USAID, through the BASICS I Project, introduced a new strategy known as the Essential Nutrition Actions (ENA) approach in two pilot districts of the highland provinces of Antananarivo and Fianarantsoa. At that time the BASICS I project reached 700,000 people and focused on breastfeeding and the Essential Nutrition Actions, immunization and the start-up of community Integrated Management of Childhood Illness. Certain elements of the BASICS I field approach were adapted by LINKAGES in 2000 to expand support for nutrition to broad segments of the population across these two provinces, as well as other areas of the country.

There were four distinct phases of LINKAGES presence in Madagascar, which are described below⁷.

Phase I: National Policy Activities: For the first two years (1997–1999), LINKAGES provided support to the Ministry of Health for national policy activities, particularly the establishment and coordination of an inter-sectoral nutrition action group, known as the GAIN (Groupe d'Actions Intersectoriel pour la Nutrition).

Phase II: District and Community Activities: In 1999, LINKAGES joined forces with the USAID-funded bi-lateral Jereo Salama Isika (JSI) project, managed by John Snow International, and began to implement a district-focused program in 10 districts⁸ of Antananarivo and Fianarantsoa provinces, covering a total population of 3.3 million. LINKAGES built its community approach on the IMCI strategy adopted by the MOH and supported by JSI, UNICEF, and WHO, as well as on BASICS I project's communication strategy of promoting small 'do-able' actions with easily recognizable health benefits. This allowed an integrated approach involving training, community mobilization, and harmonization of IEC messages and materials on child survival and nutrition. As part of the strong field alliance forged with JSI's reproductive health activities, the Lactational Amenorrhea Method (LAM) was also added as one of the modern family planning methods offered in the 10 districts. In 2001, the program between LINKAGES and JSI expanded to 13 more districts, nearly doubling the catchment area from 3.3 million to about 6 million. In addition, the program reached a significantly larger population through the mass media and IEC materials used throughout the country, and training provided to NGOs working in districts outside of the 23 program districts. This joint collaboration continued until the closure of the JSI bi-lateral in May 2003.

Phase III: Provincial Focus. With the impending closure of the JSI project, by late 2002 LINKAGES had to scale back the intensity of its assistance to communities, which had previously been channeled through government district health offices. Support was re-directed to members of provincial health teams, who in turn worked at district health offices as well as with staff of NGOs. The package of activities supported through this "provincial approach" included assisting:

- 1.) Provincial 'nutrition action groups' (GAIN) comprised of government and NGO staff
- 2.) Promotion of a self-learning ENA training module for health workers,
- 3.) Mass media, especially radio and television,
- 4.) Baby Friendly Hospital, and Workplace initiatives, and
- 5.) Pre-service medical and paramedical training including the improvement of both facility and community aspects of practical training sessions.

⁷ The interested reader is referred to a separate publication on LINKAGES accomplishments and program approach entitled *The Story of LINKAGES-AED in Madagascar: Using the Essential Nutrition Actions to Improve the Nutrition of Women and Children 1997- 2004*, by A. Guyon, V. Quinn, P. Rahantarinina, S. Rakotorinina, and V. Ravelojoana. The LINKAGES Project, AED, 2004

⁸ These 10 districts (covering a total population of 3.3 million) included: Ambohimahasoa, Ambositra, Antananarivo Nord, Antananarivo Sud, Antsirabe I, Antsirabe II, Betafo, Fianarantsoa I, Fianarantsoa II and Antananarivo Ville.

Phase II: Unanticipated interruptions in program activities, October 2001 to August 2002

During Phase II of LINKAGES' presence in Madagascar, field activities had to be halted for a significant period. First in October 2001, the MOH dictated that all USAID grants for field activities were to be frozen. As a result, many activities were interrupted, including the community activities supported by LINKAGES and JSI under Phase II. Immediately following this was a political crisis which arose from the presidential elections held in December 2001 and which lasted until August 2002. This crisis paralyzed the country, and led to the suspension of all development activities including those implemented by LINKAGES and JSI. The economic and social structures of the country were heavily affected due to a variety of circumstances, including economic and transportation blockades that prevented the free circulation of people and food. Food insecurity became the norm and households were faced with food shortages throughout the country during this time. To respond to these evolving needs, LINKAGES developed a training module 'ENA during Times of Crises', and provided this to the staff of government and NGO groups responding to the nutrition aspects of the emergency. The political crisis was eventually resolved in August 2002. However, with the imminent end of the JSI bilateral in Madagascar, by the end of 2002 LINKAGES re-focused its assistance from district health offices to provincial health offices, as described below in Phase III.

In early 2003, with co-funding by the Global Forum and USAID, LINKAGES was also able to expand this "provincial package" to three districts, covering a total population 1.4 million, located in the two coastal provinces of Tulear and Mahajanga. The provincial focus continued until late 2004.

Phase IV: Focus on Complementary Feeding. After 2004, LINKAGES' support to Madagascar continued to strengthen past achievements in breastfeeding, however, also expanded to focus more intensively on issues of appropriate complementary feeding, continued breastfeeding to 24 months, as well as feeding the sick child. Eight of the initial districts⁹ from Phase II were selected for this intensification phase on Complementary Feeding (CF) reaching a total population of 2.26 million. A summary of the major activities carried out between late 2004 and 2006 is summarized as Annex 1.

3.) The Essential Nutrition Actions (ENA) Approach

In light of the serious malnutrition problems facing the country, the Malagasy Government adopted the ENA approach to address the situation. In this regard, LINKAGES has supported the efforts of the Nutrition Service of the Ministry of Health to develop the ENA approach at all levels, from national policy initiatives to community support for mothers and families.

Seven Proven Actions: The ENA approach aims to increase coverage of nutrition support in seven key areas including the:

- 1) Promotion of optimal breastfeeding during the first six months;
- 2) Promotion of appropriate complementary feeding beginning at six months, with continued breastfeeding to two years and beyond;
- 3) Promotion of the nutritional care of the child during and after illness;
- 4) Control of vitamin A deficiency (breastfeeding, consumption of fortified and vitamin A-rich foods, maternal and child supplementation);
- 5) Control of anemia (maternal and child iron supplementation, de-worming, malaria control, consumption of fortified and iron-rich foods);
- 6) Control of iodine deficiency disorders through the consumption by all families of iodized salt; and

⁹ Betafo and Antananarivo Ville were dropped due to issues, which affected implementation.

- 7) Promotion of improved women's nutrition (increased food intake during pregnancy and lactation, iron/folic acid supplementation, treatment and prevention of malaria, de-worming during pregnancy, postpartum vitamin A supplementation).

The ENA approach promotes messages that encourage “small do-able actions” that can be taken at specific times in the life cycle to improve the nutrition of children under two years as well as women of reproductive age. These messages are promoted through multiple program opportunities both in and outside of the health sector – both at the facility and community levels. A key objective is to increase coverage of nutrition support through all available opportunities. In Madagascar, messages were developed from formative research conducted in the program sites in order to ensure their relevance for local circumstances affecting nutritional practices. For example, in regard to optimal breastfeeding, the behaviors promoted include the initiation of breastfeeding within the first hour of birth, exclusive breastfeeding for six months, frequent breastfeeding (day and night at least 10 times during the first six months), correct positioning and attachment, and emptying one breast before switching to the other. Complementary feeding messages stressed introduction of appropriate complementary foods at six months of age, food enrichment, and diversity, feeding frequency and amounts according to age, continued breastfeeding, nutritional care of the sick child, responsive feeding, and food hygiene. Other messages addressed women's nutrition as well as practices related to micronutrients.

Six Contact Points in the Lifecycle: In Madagascar, the ENA approach expands contact points to promote nutrition well beyond traditional growth monitoring and promotion activities. Using the ‘lifecycle approach’ six key contact points have been identified as they provide an opportunity for health worker counseling and interactions with pregnant and lactating women and with mothers of children less than two years of age. These contact points include during pregnancy, delivery, and immediately postpartum, postnatal, and family planning contacts, as well as during immunization, growth monitoring/well child, and sick child consultations.

To support the work of health workers, community workers promote the ENA behaviors during their educational talks at health centers and during home visits, informal encounters with peers, and community festivals. Local mass media reinforce the ENA messages given by health workers and nutrition volunteers.

Breastfeeding as an Entry Point: In Madagascar LINKAGES consistently used breastfeeding as the initial entry point to introduce the ENA approach at all levels, from national to district to communities. In the joint LINKAGES and JSI program, breastfeeding also served as the common ground between child survival (IMCI), reproductive health, and other nutrition and health programs, thus making it an integrating factor that connected a number of programmatic domains. For example, the LAM was incorporated into the breastfeeding aspects of LINKAGES ENA training and, LAM was incorporated into JSI's family planning training.

4.) Project Field Approach

The project was designed along the lines of four inter-related program prongs: i.) policy and partnerships, ii.) training, iii.) community support, and iv.) behavior change. A brief description of each follows.

Policy and partnerships: The Project focused on bringing together, through the GAIN, local government and university offices, and NGOs working on nutrition issues. The intent was to strengthen the capacities of these groups to address infant feeding issues, particularly breastfeeding practices, as well as harmonize their field approaches to promote optimal nutrition practices. Another goal was to reach consensus and consistency with these groups on the types of nutrition actions needed and the ways in which these actions could be coordinated at the field level to reinforce efforts and create synergies of program activities. Emphasis was also given to working with the primary health facilities in project sites, and the community groups that existed around these (e.g. women's groups). The use of the term “women's groups” covers a variety of local groups comprised of female members of the community. Groups varied from community to community in their composition (e.g. age or social status) as well as their focus

(e.g. income generation, religious activities, other social work, or just companionship). One popular strategy was for the staff of the target health facilities to invite the women's groups on designated days to perform local drama and songs promoting breastfeeding and other optimal ENA practices.

Training. Once the LINKAGES team identified partners and mobilized them via the GAIN mechanism, trainings sessions were initiated on ENA for selected target groups. The individuals trained included members of the GAINs, health workers from the target districts, particularly those working at the target health facilities, NGO staff, members of women's groups, as well as disk jockeys and journalists. The training was built on the ENA framework, and was of short duration and highly skills-based. Training was also given over a period to build in a supervisory element that allows previous trainees to be followed up in subsequent training sessions. The initial training was carried out by LINKAGES technical field staff who trained the trainers from the district health teams as well as from the various NGO partners. These trained trainers were then responsible for organizing and carrying out the training of health workers and community members. LINKAGES' field staff also monitored and supervised subsequent trainings, and provided support when needed.

Community support. Government health and NGO staff, community leaders, volunteers, members of local groups, and others spearheaded community mobilization and capacity building activities. Women were reached through small and large group activities, one-to-one counseling in homes and at local health posts, community mobilization events such as festivals celebrating breastfeeding and child health days, and breastfeeding promotion songs performed by women's. Members of established women's groups were trained in breastfeeding promotion and support and served as 'nutrition volunteers'. These women were crucial in helping health staff conduct educational activities during home visits and group discussions at community health centers. They also participated in national or commune-sponsored health and nutrition events and promoted improved behaviors during informal contacts with mothers and pregnant women.

Behavior change. The foundation of the approach was a multi-channel behavior change communication (BCC) strategy that targeted key ENA messages at mothers and other key family members, through health staff and community workers, to improve infant feeding practices. Emphasis was given to:

- promoting feasible ("do-able") ENA actions families can take through targeted, concise messages to achieve the desired outcomes;
- delivering age-appropriate nutrition services and messages through multiple contact points in the health system and in the community;
- using appropriate media (electronic, print, interpersonal, event, and traditional) to reach specific audiences; and
- harmonizing nutrition messages with other health programs (IMCI, reproductive health, food security, emergency, etc.), and with other sectors such as education and agriculture.

To help ensure that the ENA messages mothers receive are correct and delivered in an appropriate way, LINKAGES trained partners in both the technical content of the ENA approach as well as in the necessary communication skills. The overall goal was to change the infant feeding norms found in the community in order to create an environment supporting mothers to optimally breastfeed. Support to interpersonal communication was through skills based training (described earlier) given to health workers and community leaders to improve their technical knowledge in infant feeding and their communication skills with mothers. Members of women's groups were targeted for similar training as they comprise a pool of peer group educators as well as serve as local animators for community mobilization. Community mobilization activities included village festivals involving local drama or music groups, and primarily focused attention on the advantages of breastfeeding and related infant feeding issues. Local mass media comprised broadcasting spots and songs promoting breastfeeding through local radio channels as well as the wide spread distribution of '*gazety*' newsletter. Even though illiteracy is high in many parts of Madagascar, there is always someone who is literate in each community. As very few reading materials generally exist, the *gazety* was a popular item for reading to informal gatherings as a form of 'edutainment'. In addition, radio disk jockeys received training on breastfeeding and infant feeding to better equip them to promote these issues during live broadcasts. Music

cassettes, developed by the original program, which promoted breastfeeding in the Malagasy language, were also distributed to local taxi drivers and bus drivers to be played in their vehicles.

II. Surveys Objectives and Methodology

1.) Objectives

This final assessment has two main objectives:

The first objective was to evaluate **project results**. An end-line survey was conducted in November 2005 to compare final results to pre-project values measured in the 2000 baseline. For comparison purposes, the end-line survey comprises two distinct domains. The first domain represents the BASICS I project's two original districts (ODs), Antsirabe II and Fianarantsoa II, in which community interventions have been active since October 1996, initially under BASICS and from early 2000 under LINKAGES. The BASICS I baseline data obtained in October 1996 serve as a comparison to the present 2005 end line survey conducted by LINKAGES in these two districts. The second domain represents six of the seven project districts (PDs) originally included in the LINKAGES/JSI February 2000 baseline. Activities in these districts were carried out by LINKAGES from February 2000 through November 2005. Because of some key differences in the way in which the OD and PD baseline surveys were conducted, the data from the two domains cannot be combined. Hence, these data sets have been analyzed separately. Whenever possible, findings from the project are also compared to data from the Demographic and Health Surveys (DHS) of 1997 and 2003-04.

The second objective was to assess **trends over time** of the key ENA indicators being promoted through the behavior change strategy in the eight districts (two OD districts and six PD districts). A RAP (Rapid Assessment Procedure) survey was used to follow-up to previous RAPs conducted annually since October 2000. In addition, the RAP 2005 results pertaining to the feeding of infants 6-23 months will form the basis of an assessment of the effectiveness of an intensified effort carried out since late 2004 to improve the complementary feeding and breastfeeding practices of children 6-23 months.

For both the end-line surveys in ODs and PDs and the RAP, additional objectives included assessing immunization levels (EPI) and family planning practices, particularly of LAM, as these were originally promoted by LINKAGES field partner, JSI. There is interest as to the current levels of these indicators after the departure of JSI.

2.) Methodology

End-line Sampling. In the end-line surveys of ODs and PD, *communes* were selected using the population proportional cluster sampling method, and thereafter *fonkontany* were also selected the same way. The purpose of the end-line sampling was to determine the level of ENA indicators across the entire designated district, not just in specific sites in the district where LINKAGES had been active.

RAP Sampling. The RAP sampling strategy, explained in more detail in Annex 2, was intended to track the levels of ENA indicators over time from purposively selected *communes* in the initial focus districts. These *communes* were selected by LINKAGES' field staff during the first year of the project using the criteria that they were actively engaged with the ENA and BCC strategies. Thus, the data from the RAP provides a reflection of the best results that can be achieved under the most optimal real life circumstances when active community involvement existed. However, over time the level of engagement of these *communes* was not assessed, so there is no way to determine if this fluctuated or diminished over the years. As with the end-line survey, the selection of *fonkontany* within these selected *communes* was also carried out using a population-proportional cluster sampling method.

Table 1 provides details of the baseline and end-line surveys as well as the RAP 2005 survey.

Table 1: Description of surveys and samples, over time						
Survey Type	Survey	Sample Size			Sampling Methodology	Survey Population
	Date	0-5 months	6-11 months	12-23 months		
OD Baseline (by BASICS I project)	Oct 1996	370	351	720	Stratified cluster sampling across communes, by district over BASICS' two focus districts	Mothers of children less than 23 months old
PD Baseline	Feb 2000	320	280	600	Stratified cluster sampling across communes, by district over 7 focus districts	
OD End-line	Nov 2005	320	320	320	Stratified cluster sampling across communes, by district over old BASICS' two focus districts	
PD End-line	Nov 2005	500	515	745	Stratified cluster sampling across communes, by district over 6 focus districts (the original 7 th district, Betafo, was dropped in 2004)	
RAP	Oct 2005	320	320	320	Purposeful stratified cluster sampling in 8 focus districts (most active communes only selected in RAP2000)	

Control Sample. A control site was included in the end line survey and all RAPs. The control was selected to match project districts and was randomly selected from the same region and eco-system. However, after the survey was conducted, a decision was made not to use these data, as contamination seemed to have taken place due to unanticipated factors (e.g. presence of health staff originally trained by project and transferred to control site, active engagement of other partner groups trained by project, broadcast of project messages into control sites. etc). This type of problem with maintaining "pure" control sites is not uncommon when broad scale behavior change communication programs are assessed since health staff trained in project activities may move to new areas of the

country or mass media dissemination of project messages can be transmitted into new geographic areas not directly being targeted by the project¹⁰.

Selection of households. In each selected village, the households were interviewed based upon a random starting point followed by the systematic choice of every second household. The target population consists of children from 0-5 months, 6-11 months, and 12-23 months of age. The sample size for each strata of age was calculated using the methods defined by WHO according to the three following criteria: 1) an exclusive breastfeeding rate at baseline of 68% for infants less than 6 months, 2) the proportion of children from 6-23 months having been first introduced to complementary foods after 6 months at baseline of 34%, and 3) the ability to detect a 10% change with a 95% confidence interval.

A total of 2,720 structured interviews were undertaken in the current end-lines for ODs and PDs (see Table 1 for breakdown of sample size by age). Overall 49% were boys and 51% girls in ODs, and 50% boys and 50% girls in PDs. Average household size was 6.2 members in ODs and 5.3 members in PDs.

A total of 960 structured interviews were undertaken in the current RAP. Overall 51% were boys and 49% were girls. Average household size was 5.7 members.

Survey Instruments. To conduct this evaluation, LINKAGES worked closely with members of the GAIN, the Ministry of Health, and the regional and districts teams. The survey instruments were the same for all the surveys (e.g. end-line and RAP). The questionnaire was primarily composed of questions adapted from the baseline survey and the RAP surveys of 2000, 2001, 2002, and 2004. Questions focused on breastfeeding and complementary feeding practices, feeding of sick children, women's nutrition, vitamin A, vaccinations, family planning, and LAM. The 24 hour recall question pertaining to foods consumed by the child in was modeled after the food groups proposed by Ruel and Arimond 2003. This same reference provided guidance on the definition of meals and snacks. Additional questions related to ENA, for example those related to control of anemia (e.g. de-worming), handling of children's food, and iodized salt as well as others, were also included.

During the survey, additional information was collected to evaluate knowledge of frontline health workers and members of women's groups. Annex 3 contains copies of all the questionnaires used.

Training and Data Collection. The team of 16 persons, comprised each by one supervisor and two interviewers, was trained 24-26 October 2005. The list of the members of the team is presented in Annex 4.

The data were collected between October 27 and November 12, 2005. The data analysis and the preparation of the report began in November 2005.

The quantitative data was entered into Epi Info 6.04d and then transferred to and analyzed using SPSS 12.0.

Data Analysis and Presentation. Statistical testing was carried out to determine if changes over time, from baseline to end-line were significant, and in these instances, the *p* level is noted. Data were also weighted by age when undertaking analysis using the combined age group 6-23 months, for example, when analyzing results related to complementary feeding. As Betafo district was eventually dropped by the project in 2004, the 2000 baseline data from the original seven PDs had to be adjusted accordingly to remove Betafo data to make it comparable with the end-line data set from the remaining six PDs.

¹⁰ Caulfield, L., S. Huffman and E. Piwoz, Interventions to Improve Complementary Food Intakes of 6- to 12- month old Infants in Developing Countries: Impact on Growth, Prevalence of Malnutrition, and Potential Contribution to Child Survival, Food and Nutrition Bulletin 1999; 20: 183-200.

For each of the ENA areas, in the majority of cases the data are presented as two sets of graphs. **The first set** of graphs focus on an assessment of project results by comparing baseline and end-line data for ODs and PDs. National DHS survey data from 1997 and 2003-04 are presented when they exist. Statistical comparisons between baseline and end-line values of ENA indicators were made for ODs and PDs separately.

The **second set** of graphs for ENA indicators provide an annual snapshot from the RAPs that were carried out on a sub-set of purposively selected households. These data are presented to show how indicators changed over time. Unless indicated, no statistical comparisons were made between RAP surveys.

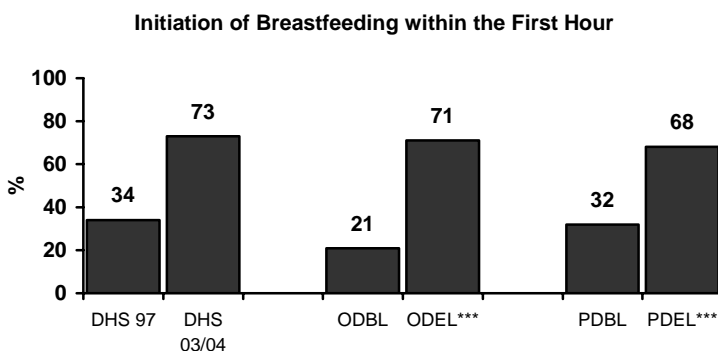
III. Results of the Quantitative Study

1. Breastfeeding of Children from 0-5 Months

The promotion of breastfeeding is the entry point for all the other nutrition actions to be adopted to improve maternal and child health. LINKAGES' behavior change and communication strategy focused on promoting early initiation, exclusive breastfeeding, adequate frequency of feedings, and emptying one breast before switching to the other¹¹.

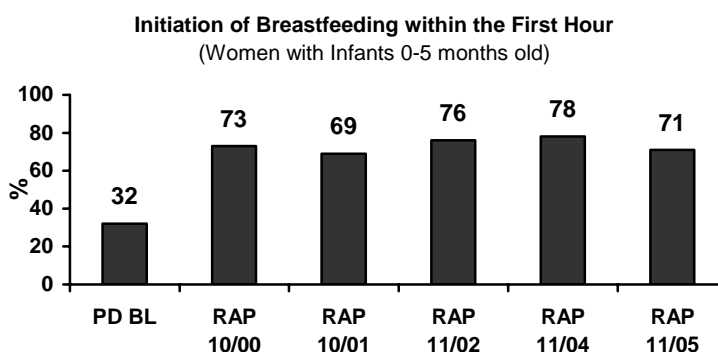
A. It is recommended that the infant be put to the breast immediately after birth

Project Results¹²



Proportion of women initiating breastfeeding within the first hour after delivery		
	%	N
DHS 97 (women with infants < 5 yrs)	34	3893
DHS 03/04 (ditto)	62	6179
OD BL (women with infants 0-5 months)	21	370
OD EL (ditto)	71	320
PD BL (ditto)	32	600
PD EL (ditto)	68	500

Trends over time



Proportion of women initiating breastfeeding within the first hour after delivery (Women with Infants 0-5 months)		
	%	N
PD BL	32	600
RAP 00	73	195
RAP 01	69	199
RAP 02	76	180
RAP 04	78	320
RAP 05	71	320

¹¹ This last practice was not assessed in the current study.

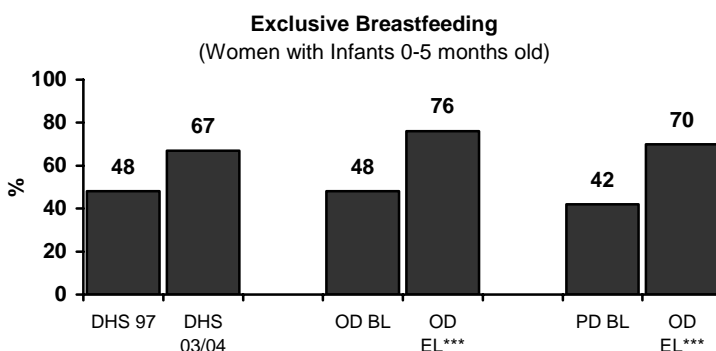
¹² *p<0.05, **p<0.01, ***p<0.001. Note, this applies to charts throughout the results section.

Conclusions:

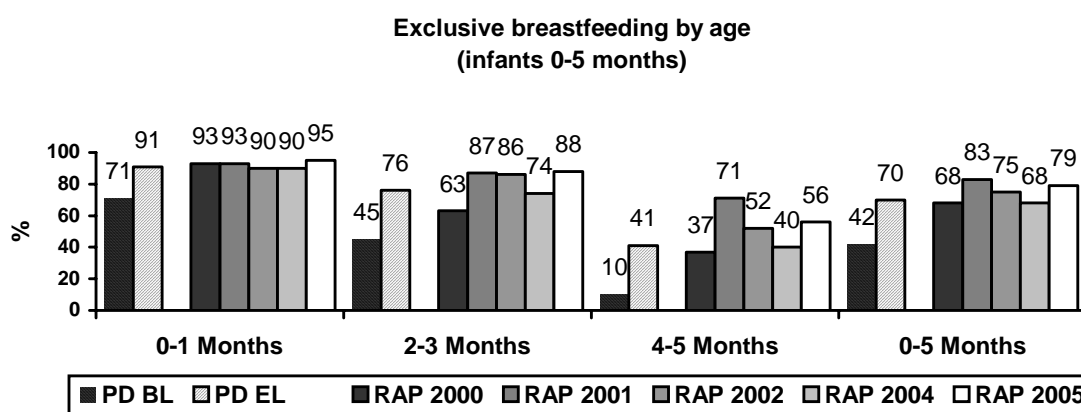
- The Timely Initiation of Breastfeeding rate (TIBR) within the first hour of birth more than tripled in ODs (21% to 71%; $p<0.001$) and doubled in PDs (32% to 68%; $p<0.001$).
- As shown by the trend data, timely initiation of breastfeeding showed rapid improvement within eight months, and remained high over time despite the changing intensity of the program. In particular, TIBF remained high, as measured by the RAP02, even after the political crisis of 2001/02 when all field activities ceased for many months, and even remained high through to the RAP04 when support to districts was decreased with the project's shift to supporting provincial activities. Being a relatively straightforward 'one-off' behavior may make it easy to maintain over time
- There appears to be a maximum threshold of around 70% for TIBR across all three comparison groups (DHS, OD, and PD). Further analysis showed that in LINKAGES program sites, this level was neither affected by the place of delivery (home vs. health facility) nor by program intensity (eg. community vs. provincial focus).
- The overall national level improvement in TIBR (34% to 73% in the two DHS surveys) may be due to the wide network of partners across the country with whom LINKAGES worked via the national and provincial GAINs, which led to wide coverage and message harmonization for the promotion of improved nutrition practices.

B. It is recommended to exclusively breastfeed until 6 months

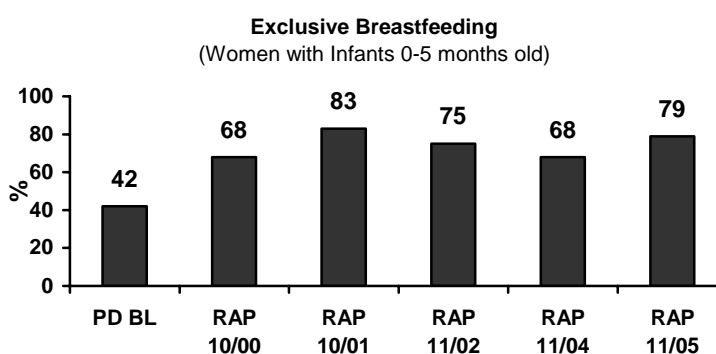
Project Results



Proportion of women exclusively breastfeeding their infant less than 6 months old		
	%	N
DHS 97 (women with infants < 5 yrs)	48	668
DHS 03/04 (ditto)	67	615
OD BL (women with infants 0-11 months)	48	370
OD EL (ditto)	76	320
PD BL (ditto)	42	319
PD EL (ditto)	70	500



Trends over time



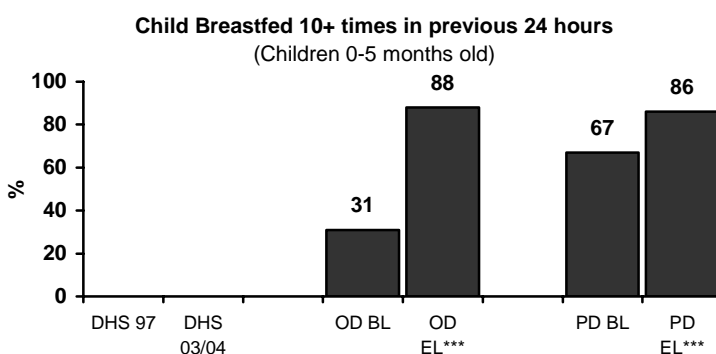
Proportion of women exclusively breastfeeding their infant less than 6 months old		
	%	N
PD BL	42	319
RAP 10/00	68	195
RAP 10/01	83	199
RAP 11/02	75	180
RAP 11/04	68	320
RAP 11/05	79	320

Conclusions:

- The Exclusive Breastfeeding Rate (EBR) increased by 1½ times in OD from 48% to 76% ($p < 0.001$) and in PD from 42% to 70% ($p < 0.001$).
- Similar to TIBF, the EBR showed rapid improvement within eight months, and remained relatively high over time despite this being a 'longer term' behavior that must be sustained continuously over 6 months.
- Unlike TIBR, the EBR did fluctuate according to program intensity (eg. community vs. provincial) which dictated the level of community level activities (eg. training of health workers and members of women's groups, mass media, etc). For example, a lessening in program intensity occurred after the political crisis of 2001-02 resulting in the cessation of all field activities for one year and lower levels of EBR were measured by RAP02. In addition, after the shift of focus from district to provincial level in 2003, lower EBR levels were measured in the RAP04. Once more intensive support to communities was resumed in late 2004, an increase was seen in the EBR as measured by the RAP05.
- Across all RAPs, EBR in 0-1 month old babies remains high over time, even independent of program intensity. This may indicate a 'normative' shift in exclusive breastfeeding behavior for these younger infants. However, as discussed above, for the older age groups, EBR varies depending on program intensity.
- The overall national level improvement in EBR (48% to 67% in the DHS surveys) may be due to the wide network of partners across the country with whom LINKAGES worked via the GAINs, which resulted in message harmonization for improved nutrition practices as well as wide geographical coverage.

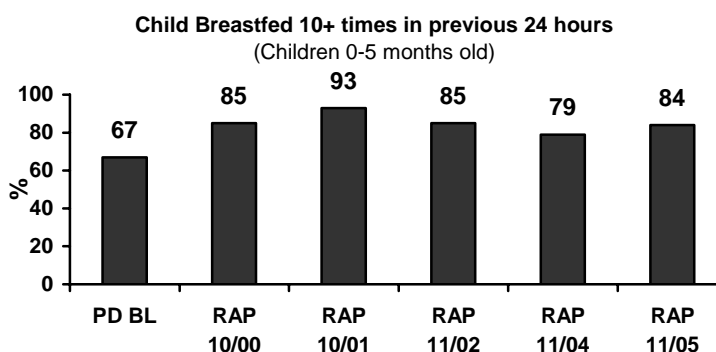
C. The current recommendation is to breastfeed at least 10 times a day for infants from 0 to 5 months.

Project Results



Child (0-5 months old) Breastfed 10 or more times in previous 24 hours		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	31	362
OD EL	88	318
PD BL	67	320
PD EL	86	500

Trends over time



Child (0-5 months old) Breastfed 10 or more times in previous 24 hours		
	%	N
PD BL	67	320
RAP 10/00	85	194
RAP 10/01	93	199
RAP 11/02	85	180
RAP 11/04	79	320
RAP 11/05	84	320

Conclusion:

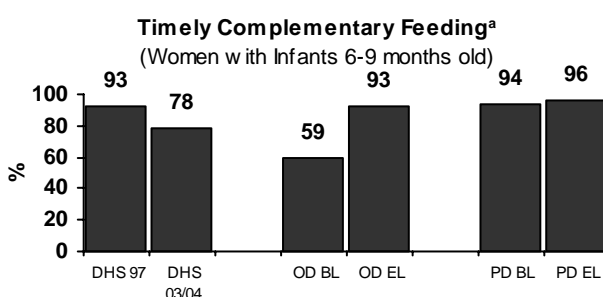
- Correct frequency of breastfeeding in children 0-5 months at least 10 times per day showed significant improvement, from 31% to 88% in ODs and from 67% to 86% in PDs (both $p < 0.001$), with these changes occurring rapidly within 8 months, as shown by the RAP data.
- Trend data also appear to follow the changing program intensity (eg. community vs. provincial focus) over time.

2. Complementary Feeding with Breastfeeding of Children 6-23 Months

For young children 6-24 months of age, appropriate complementary feeding, in addition to continued breastfeeding, represents a set of complicated behaviors, which must also be modified continuously over time to meet the changing nutrition needs of growing children. The project promoted improved nutritional practices for children 6-24 months of age through specific messages aimed at encouraging parents and caretakers to adopt better child feeding practices. Some of the original messages developed early on in the project were adapted to conform to the newly released Guiding Principles for Complementary Feeding of the Breastfed Child (WHO/PAHO 2002). The focus of the complementary feeding messages was on the frequency of feedings for two age groups (6-11 months and 12-23 months), continuation of breastfeeding until 23 months, the enrichment of food staples with what is available at home, variation of enriched foods, and the giving of a specific quantity of food in the child's own bowl. The current assessment did not examine the quality, density, or the quantity of the food given to the child as this level of precision and detail could not be undertaken by this type of large-scale survey. It should also be noted that Annexes 5 and 6 present further analysis of the complementary feeding data presented below using two recently recommended algorithms to generate an overall 'complementary feeding index' to assess young child feeding practices.

A. It is recommended to introduce complementary foods from 6 months of age in addition to continued breastfeeding to 23 months and beyond

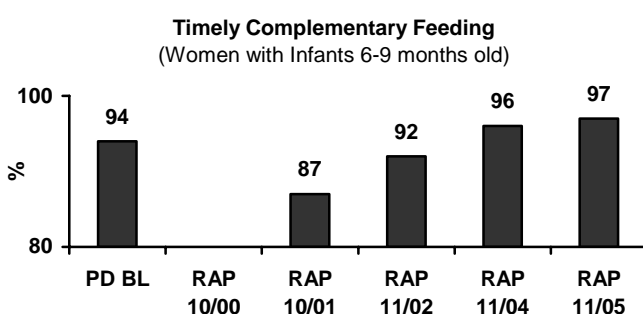
Project Results



Timely Complementary Feeding of infants 6-9 months old		
	%	N
DHS 97	93	413
DHS 03/04	78	445
OD BL	59	
OD EL	93	134
PD BL	94	192
PD EL	96	362

(a): significance testing only carried out on PD samples as data from OD not complete to conduct statistical analysis)

Trends over time



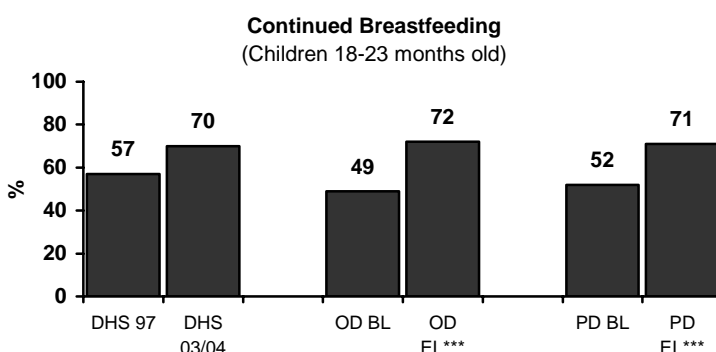
Timely Complementary Feeding of infants 6-9 months old		
	%	N
PD BL	94	192
RAP 10/00	n/a	n/a
RAP 10/01	87	75
RAP 11/02	92	65
RAP 11/04	96	231
RAP 11/05	97	209

Conclusions:

- The TCF indicator does not capture the problem commonly encountered in Madagascar of too early an introduction of complementary feeding. Hence, as can be seen the level of this indicator was high at baseline and remained high over time, thus providing little information useful for program management and evaluation.
- In the DHS 2003-04, the TCF is lower than DHS 97, and this appears to be due to the side effects of an extended EBF practices in the population. For example, in the DHS 2003-04, the EBF in infants 6-7 months was 13% and in infants 8-9 months was 5%, as compared to the DHS 1997 values of 4% and 2%, respectively for the same age groups.

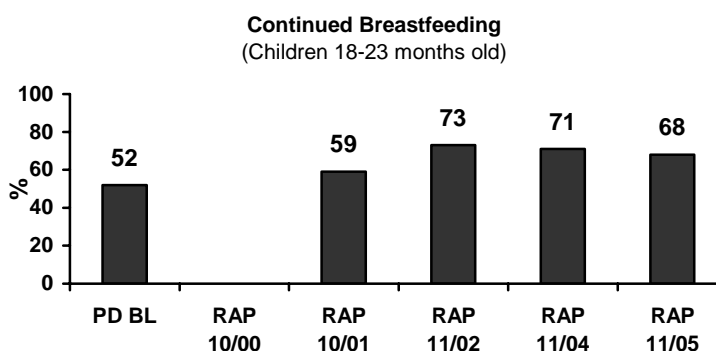
B. It is recommended to continue breastfeeding until 23 months and beyond.

Project Results

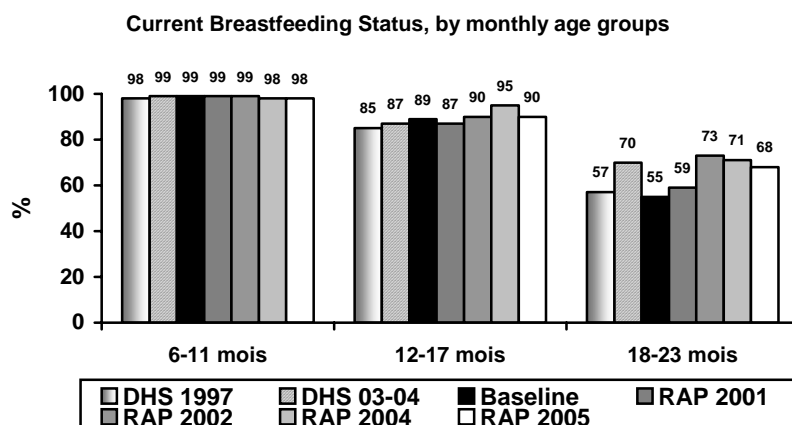


Continued Breastfeeding of Children 18-23 months old		
	%	N
DHS 97	57	545
DHS 03/04	70	554
OD BL	49	361
OD EL	72	141
PD BL	52	286
PD EL	71	335

Trends over time



Continued Breastfeeding of Children 18-23 months old		
	%	N
PD BL	52	286
RAP 10/00	n/a	n/a
RAP 10/01	59	81
RAP 11/02	73	74
RAP 11/04	71	148
RAP 11/05	68	142

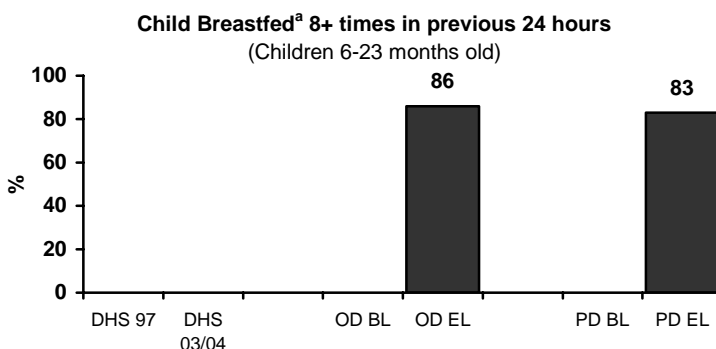


Conclusions:

- The continuation of breastfeeding has always been high in the age group 6 to 17 months, with the baseline showing a level of over 90%.
- Significant increases in continued breastfeeding were seen in the age group 18-23 months, from 49% to 72% in ODs and from 52% to 71% in PDs (both $p < 0.001$) as shown above. Taking into account the lag effect, the trends shown above suggest that intensity of program implementation may affect the continuation of breastfeeding in this older age group.

C. It is recommended for mothers to breastfeed children from 6-23 months 8 times or more per day

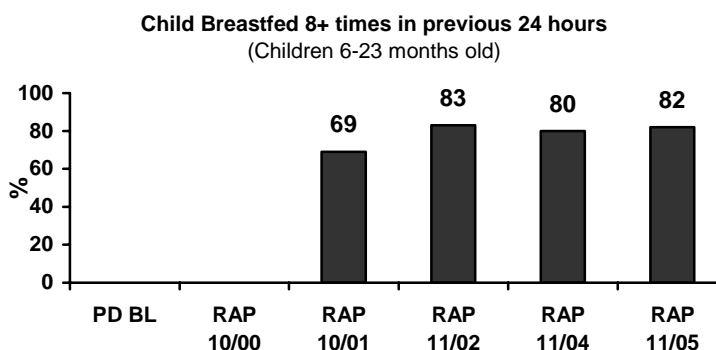
Project Results



Child (6-23 months old) Breastfed 8 or more times in previous 24 hours		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	86	583
PD BL	n/a	n/a
PD EL	83	1130

(a): Surveys conducted before 2001 recorded different breastfeeding frequency options and therefore are not comparable to the latest data.

Trends over time



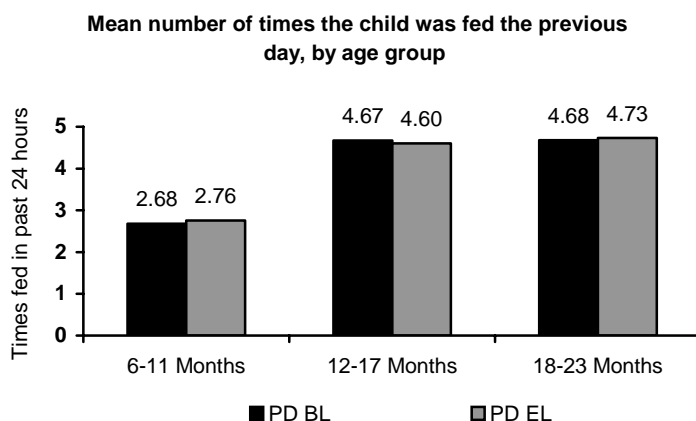
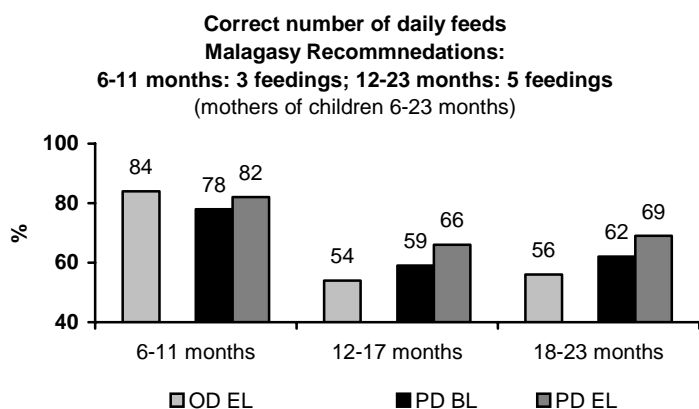
Child (6-23 months old) Breastfed 8 or more times in previous 24 hours		
	%	N
PD BL	n/a	n/a
RAP 10/00	n/a	n/a
RAP 10/01	69	285
RAP 11/02	83	237
RAP 11/04	80	582
RAP 11/05	82	571

Conclusions:

- The frequency of breastfeeding (6-23 months) shows a rapid improvement, within 12 months, as shown by the differences between the RAP 01 and RAP 02 levels.
- Comparisons with baseline levels cannot be made as the data do not exist.

D. It is recommended that for infants from 6 to 11 months to receive three meals per day and children from 12 to 23 months three meals plus two snacks per day.

Project Results

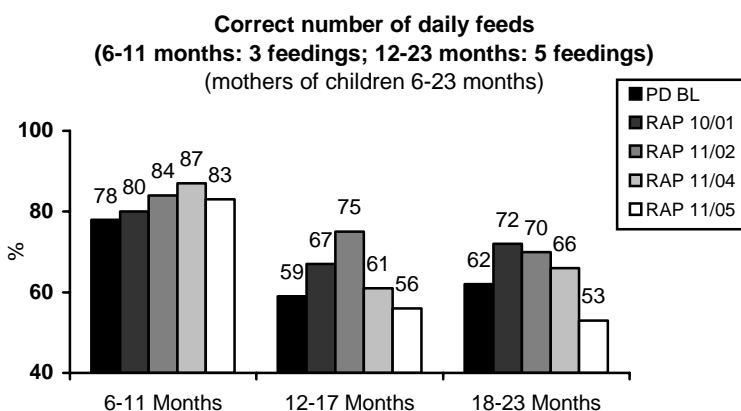


Correct feeding frequency in previous 24 hours – Children 6-11 months old		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	84	320
PD BL	78	280
PD EL	82	514

Correct feeding frequency in previous 24 hours – Children 12-17 months old		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	54	179
PD BL	59	314
PD EL	66	410

Correct feeding frequency in previous 24 hours – Children 18-23 months old		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	56	141
PD BL	62	286
PD EL	69	335

Trends over time



Correct feeding frequency in previous 24 hours – Children 6-11 months old		
	%	N
PD BL	78	280
RAP 10/00	n/a	n/a
RAP 10/01	80	94
RAP 11/02	84	90
RAP 11/04	87	302
RAP 11/05	83	316

Correct feeding frequency in previous 24 hours – Children 12-17 months old		
	%	N
PD BL	59	314
RAP 10/00	n/a	n/a
RAP 10/01	67	135
RAP 11/02	75	105
RAP 11/04	61	172
RAP 11/05	56	178

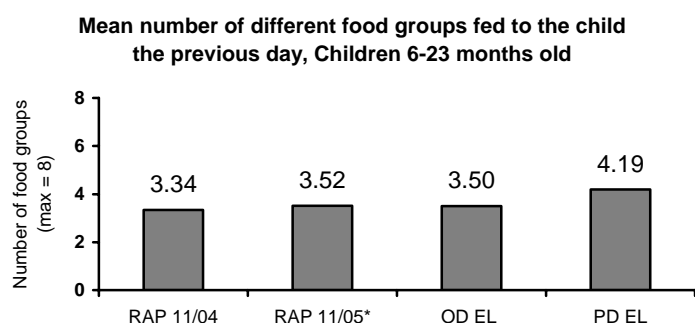
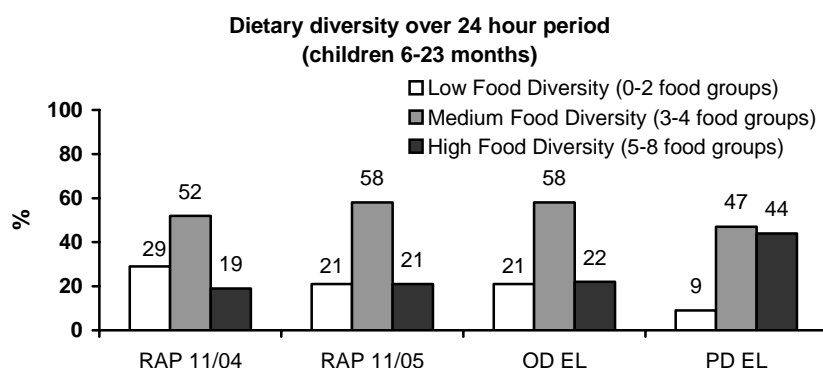
Correct feeding frequency in previous 24 hours – Children 18-23 months old		
	%	N
PD BL	62	286
RAP 10/00	n/a	n/a
RAP 10/01	72	82
RAP 11/02	70	74
RAP 11/04	66	148
RAP 11/05	53	142

Conclusions:

- The majority of infants under 12 months old are given the correct number of feedings according to the Malagasy infant feeding recommendations (3 times/day).
- However, the percent of children 12-23 months being fed the correct number of feedings (5 times/day) is much lower.
- There does seem to be a trend of improvement in feeding frequency in children 12-23 months when comparing baseline and end line data in project areas (PD BL versus PD EL), however, the difference was not statistically significant.
- The reason for less progress being made in the number of times infants and young children are being fed is not clear. Problems related to food insecurity at the household level may account for why some mothers are not feeding their children frequently enough. This was an issue identified in the past qualitative studies carried out in project sites.
- More attention will be required to improve feeding frequency, and this should include carrying out further formative research to ascertain obstacles as well as to fine-tune messages to address these obstacles.

E. It is recommended to enrich each meal with a variety of foods

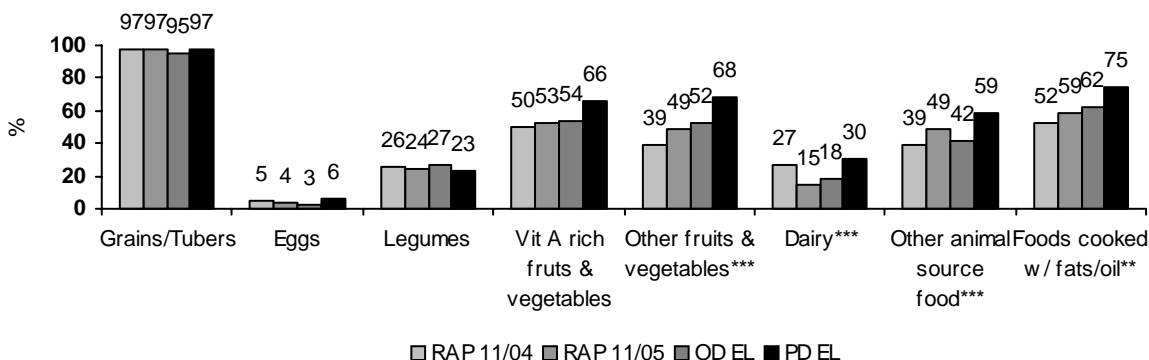
Information on food diversity, using a 24-hour recall, was first collected in the RAP 2004. As a result, comparative information does not exist from the baseline surveys. The optimal practice promoted by LINKAGES and its partners was to enrich the children's porridge or family staple with a variety of additional foods at each meal, particularly animal foods, fats/oils, as well as foods rich in Vitamin A and iron.



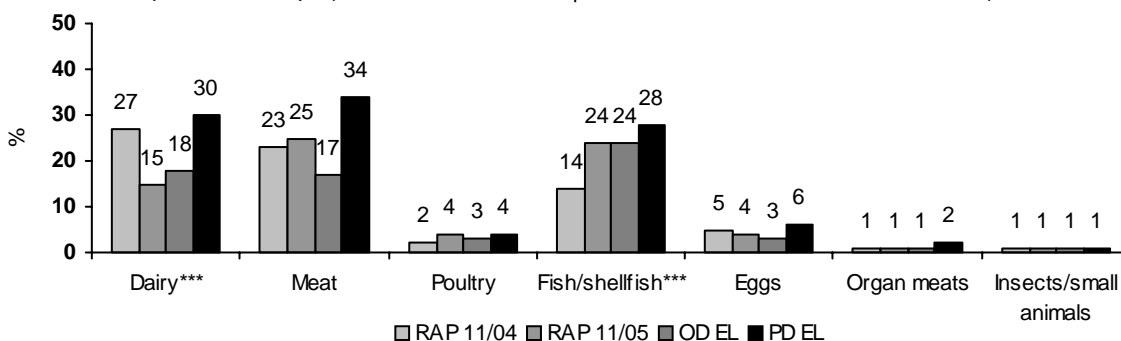
Conclusions:

- Dietary diversity is a problem for young children in Madagascar, with many children still only eating two or less food groups.
- However, it does appear that there is an improving trend in RAP communities towards increased dietary diversity as significant improvements were found in the number of food groups eaten, from 3.34 to 3.52, between the RAP 04 and the RAP 05 ($p < 0.05$). This may reflect true progress being made since intensive support to complementary feeding was initiated immediately following the RAP 04.
- Unfortunately no baseline data exist to make conclusive statements from the end-line results obtained in the ODs and PDs

Percent of children 6-23 months old eating various food groups
(24-hour recall) - (P-values shown for comparison between RAP 2004 and RAP 2005)



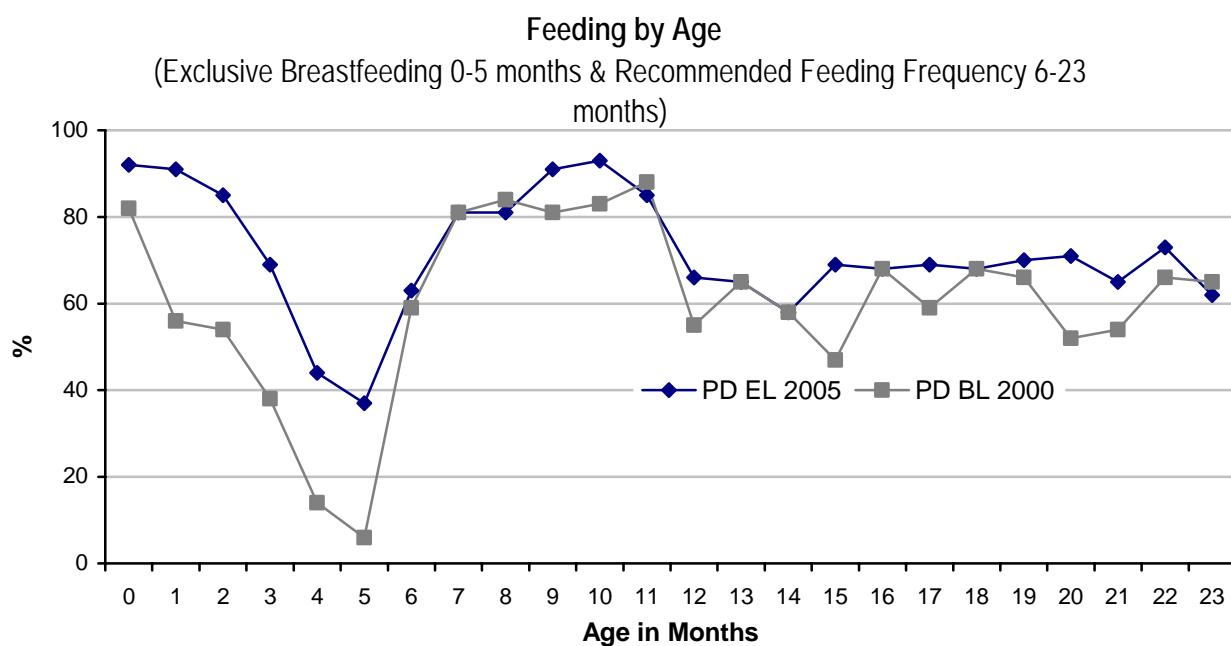
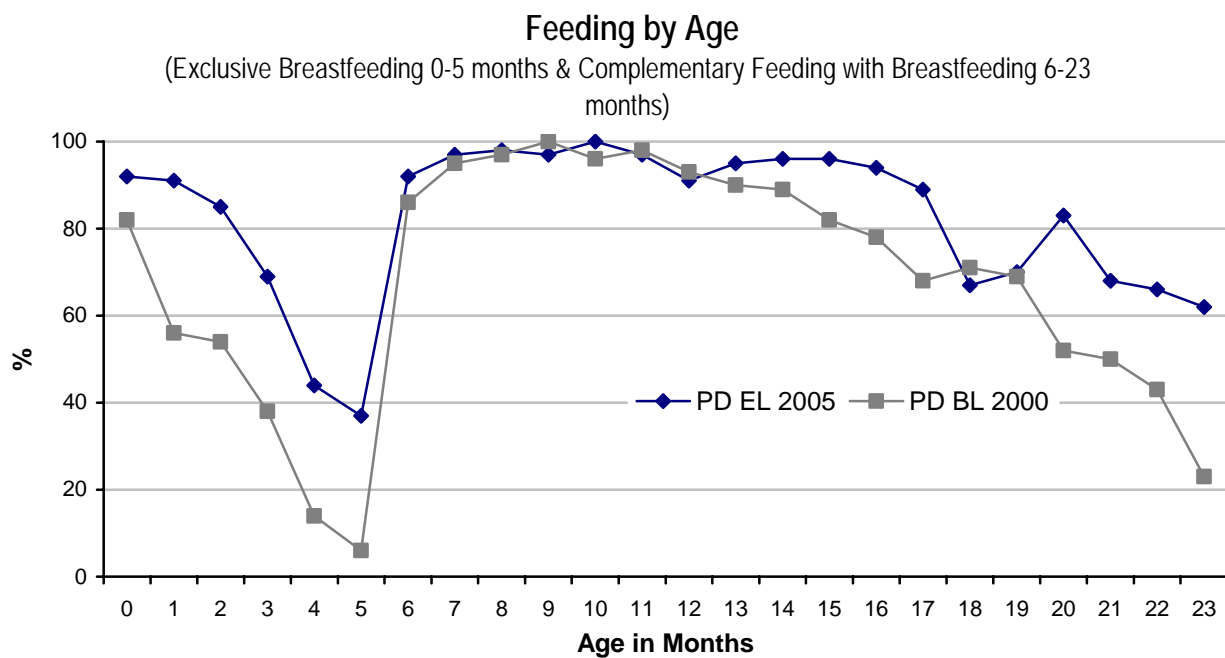
Percent of children 6-23 months old eating various animal source foods
(24-hour recall) - (P-values shown for comparison between RAP 2004 and RAP 2005)



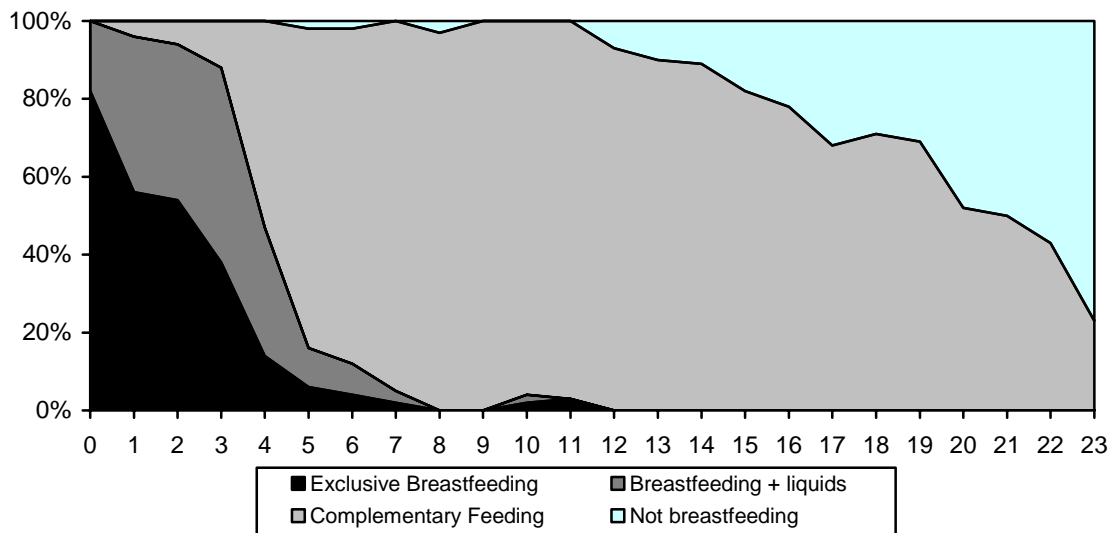
Conclusions:

- For both the end-line and RAP samples, of the mothers surveyed almost half feed their children animal source foods and foods rich in Vitamin A and more than half use fats/oils to enrich the meals. These values are higher than those observed in the DHS 2003-04, which found only 27% of children reported to be eating animal source foods (including eggs) and only 30% eating fats/oil.
- There were also signs of improvements in dietary diversity, particularly for the specific food groups promoted by LINKAGES. Data from the RAP04 and the RAP 05 showed that these improvements included more children eating fruits/vegetables, foods cooked in oil/fats as well as fish/shellfish. Inexplicably there seems to be a significant drop in the consumption of dairy products in these same samples of children; however, this is the same level, 16%, as that found in the DHS2003-04.
- It should also be noted that additional analysis showed that the majority of children who received at least one animal source food in fact were eating more than one animal source food in the preceding 24 hours.
- The PD EL sample shows the best values for dietary diversity across all but one of the food groups. Based on available data, which is limited, this difference cannot be explained in terms of effects of the project's activities versus effects of different characteristics of the PD EL group versus the OD EL group and the RAP samples. Further analysis shows that none of the seemingly obvious environmental and socio-economic variables fully account for the high value of the indicators for the PD EL sample. Access to daily markets appears to make a difference, rural vs. urban makes a difference, and food insecurity makes a difference. However, when all of these and other variables are controlled for, there is still a significant difference between the PD EL sample and the other groups.

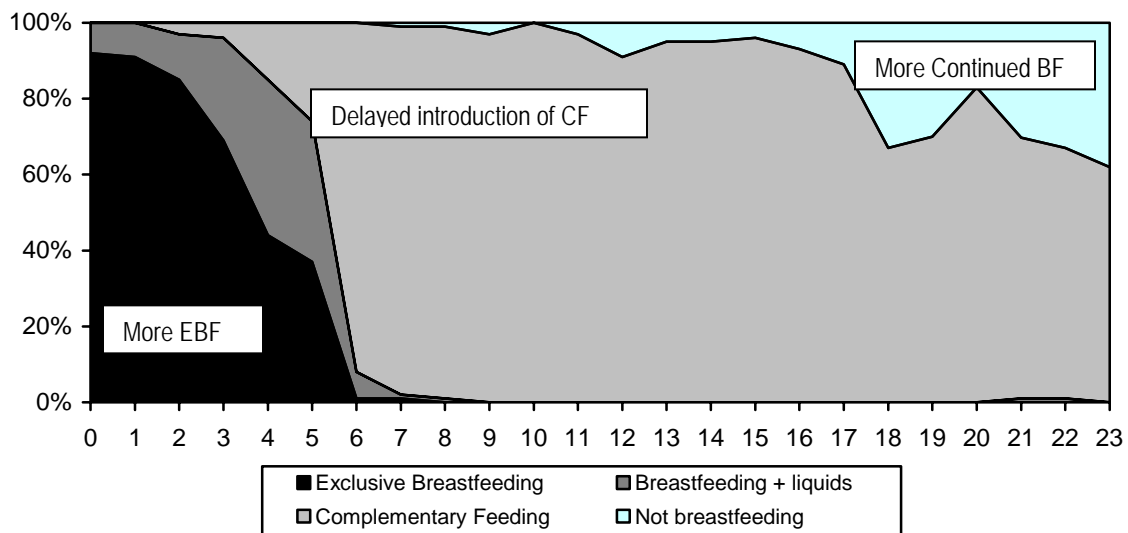
F. Summary of Feeding Practices 0 to 23 months



Before: Feeding Style by Age at Baseline 2000



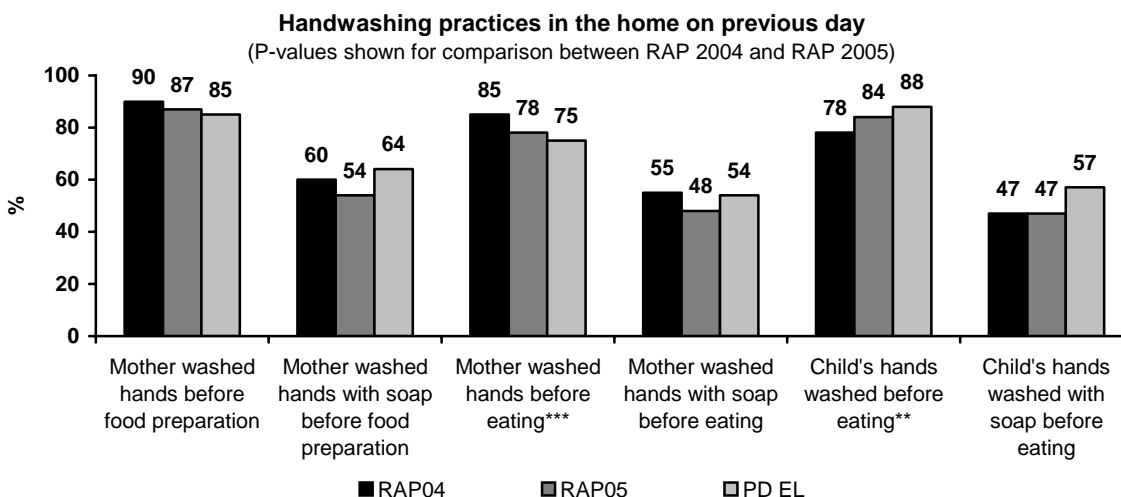
After: Feeding Style by Age at Endline 2005



Conclusions:

- The four figures above illustrate that compared to 2000 baseline levels, in the 2005 end line more mothers were practicing exclusively breastfeeding 0-5 months, delaying the initiation of complementary feeding until 6 months, as well as continuing to breastfeed until 23 months

G. It is recommended to wash hands with soap and water before food preparation and eating.



Conclusions:

- Hand washing rates are relatively high, but the use of soap is much lower. There is no change between the RAP04 and RAP05. Why the handwashing rate of mothers declined before eating is not known, though this was not a message that received much attention.
- Significantly more children had their hands washed before eating in the RAP 05 compared to the RAP 04, 84% versus 78% ($p < 0.001$).

3. Nutritional care of the sick child

The recommendations for the feeding of sick children correspond with the international Integrated Management of Childhood Illness (IMCI) recommendations, which have been adopted by the Ministry of Health and Family Planning in Madagascar. The project focused on messages that encouraged child caretakers to provide more recuperative feeding to children after each illness. Data are presented below only for PD BL and PD EL, but not for OD BL and OD EL as not all indicators were collected in OD BL.

Child Illness

Proportion of children 0–5 months suffering from an illness during the previous 2 weeks							
	PD BL	2000	2001	2002	2004	2005	PD EL
<i>Infant Ill</i>	30%	29%	28%	24%	28%	14%	22%
Diarrhea	6%	6%	3%	5%	3%	2%	3%
Fever	10%	5%	3%	7%	7%	5%	6%
Cough	22%	17%	21%	13%	16%	8%	11%
Other	3%	4%	4%	3%	6%	2%	7%

Proportion of children 0–23 months suffering from an illness during the previous 2 weeks							
	PD BL	2000	2001	2002	2004	2005	PD EL
<i>Infant Ill</i>	38%	n/a	31%	32%	37%	24%	35%
Diarrhea	12%	n/a	8%	12%	12%	7%	12%
Fever	15%	n/a	7%	11%	11%	11%	12%
Cough	22%	n/a	17%	14%	16%	10%	16%
Other	2%	n/a	4%	3%	6%	3%	8%

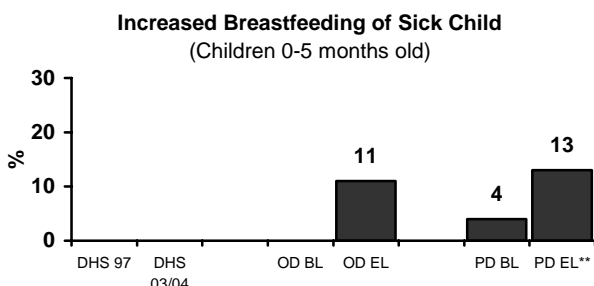
Conclusions:

- As the surveys were implemented during the same period, October and November, there should be no seasonal effect.
- There is significant decrease of disease incidence for infants under 6 months in PD BL and PD ED from 30% (n=320) to 22% (n=500) ($p<0.01$), respectively, when all illnesses were combined. No significant differences were found when illness was examined separately. It is likely that the increase of EBF has contributed to this trend. There is no significant change over time seen for the incidence of disease in older children.
- While there is a decrease of diarrhea prevalence from 6% to 3%, this difference is not significant. It is important to note that diarrhea among children under 6 months old has never been a serious problem in project sites.
- When all sample groups are combined, it is found that of those who are exclusively breastfed 2% had diarrhea 2 weeks prior the survey, compared to 7% who had diarrhea among those who were not exclusively breastfed ($p<0.001$). Although the surveys do not allow identifying the direction of causality, these results do suggest accurate self-reporting by mothers concerning how they feed their infants. Similarly, there is a statistical difference in the existence of any illness during the previous 2 weeks based on whether the child was exclusively breastfed or not, with EBF children having lower illness than non-EBF children ($p<0.001$).

A. It is recommended to increase the frequency of breastfeeding during illness for children 0-23 months.

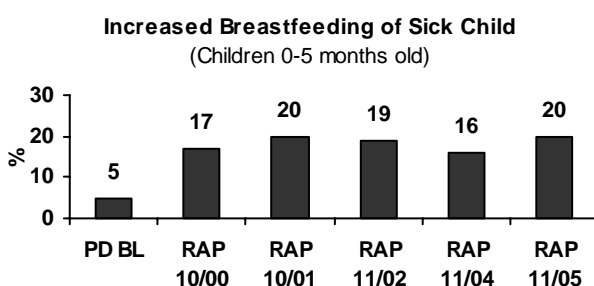
Infants 0-5 Months

Project Results



Increased Breastfeeding of Sick Children 0-5 months old		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	11	55
PD BL	4	89
PD EL	13	109

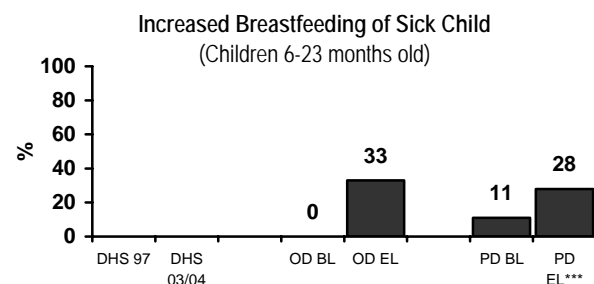
Trends over time



Increased Breastfeeding of Sick Children 0-5 months old		
	%	N
PD BL	5	89
RAP 10/00	17	63
RAP 10/01	20	56
RAP 11/02	19	43
RAP 11/04	16	89
RAP 11/05	20	45

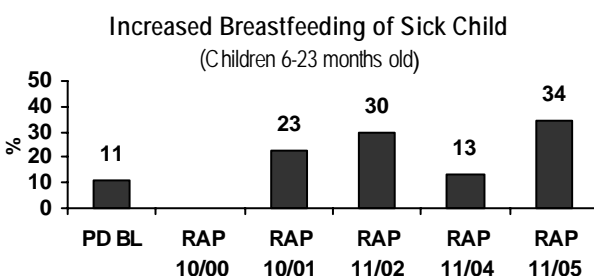
Children 6-23 Months

Project Results



Increased Breastfeeding of Sick Children 6-23 months old		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL		
OD EL	33	238
PD BL	11	338
PD EL	28	498

Trends over time



Increased Breastfeeding of Sick Children 6-23 months old		
	%	N
PD BL	11	338
RAP 10/00	n/a	n/a
RAP 10/01	23	102
RAP 11/02	30	97
RAP 11/04	13	269
RAP 11/05	34	187

Conclusions:

- There is significant improvement in the nutritional care of sick children in both young infants 0-5 months ($p < 0.01$) and older infants 6-23 months ($p < 0.001$) in terms of increased breastfeeding during illness. For the younger infants 0-5 months, this improvement occurred rapidly within 8 months. However, it should be noted that the way in which this information is collected is highly subjective, as mothers are asked to rate if they fed 'more,' 'the same,' or 'less.'
- However, despite continued promotion of increased breastfeeding during illness, high levels are never reached, with the majority of children ($> 70\%$) not receiving special nutritional care during illness.

B. It is recommended to increase the frequency of feeding during illness for children 6-23 months.

Regarding the frequency of feeding during illness for children 6-23 months, no change was measured in the indicators. Sick children suffer from anorexia and do not want to eat. More work is needed to refine further the strategy for feeding sick children, perhaps providing more focus on increasing breastfeeding as it has both nutritional and comfort values and may be a more feasible behavior than feeding more complementary foods.

C. It is recommended to increase the frequency of breastfeeding after illness for children 0-23 months.

There is no change in the nutritional care of infants 0-5 months after illness. The question used in the survey tool to assess this indicator is stated as do you feed your infant "more, the same, or less" which is highly subjective and may lead to bias. In addition, as breastfeeding rates are already high, it is difficult to assess the practice of 'breastfeeding more'. Samples sizes were also very small for the comparison groups thus making the analysis problematic.

D. It is recommended to increase the frequency of feeding after illness for children 6-23 months.

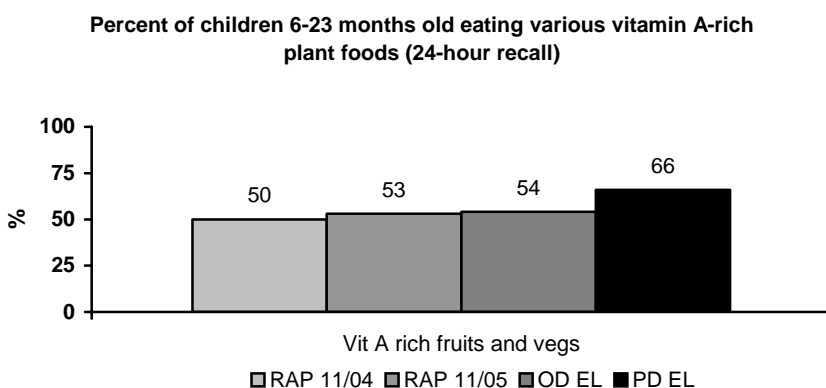
No improvement was evident in increasing the frequency of feeding after illness. Similarly, the question used is subjective and the number of children small.

Conclusions:

- Nutritional care of sick children is a key area of intervention for improving nutritional status; however, it remains an area that is very difficult to change.
- The question used to assess feeding behavior during and after illness is highly subjective, and in need of further improvement.

4. Control of Vitamin A deficiency

A. *It is recommended that vitamin A rich foods are consumed each day*



Conclusion:

- Improvement is still needed in the consumption of Vitamin A rich fruits and vegetables. As a comparison, the level found in the DHS 2003-04 was 68%, similar to the PD EL level.
- Further formative research is needed to determine the reasons for the low consumption in regards to availability, access and utilization issues, all of which are potentially important factors.

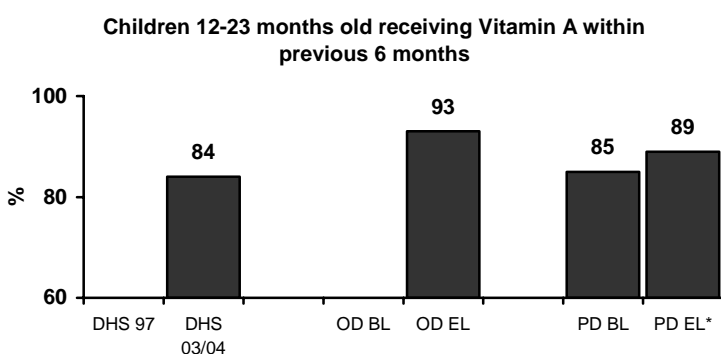
Starting in the year 2000, the country has implemented mass supplementation of vitamin A twice a year for children 6-59 months (see box below for further details). De-worming was also included beginning in September 2004. The current survey focused on assessing supplementation of children 6-23 months of age.

History of vitamin A supplementation for children 6-59 months in Madagascar:

1996	No national protocol for vitamin A
1998	Validation of the protocol (GAIN) and routine supplementation of children 6-59 months
2000	Baseline survey: coverage obtained through NID (AVA)
Sept 2000	MoH launches national Vitamin A supplementation campaign
April 2001	Second national vitamin A supplementation campaign
Oct 2001& May 2002	Mass vitamin A supplementation campaign at the national level
October 2002	Mass vitamin A supplementation campaign at the national level combined with NID
Apr, Oct 2003 & Apr 2004	Mass vitamin A supplementation campaign at the national level
September 2004	Mass vitamin A supplementation campaign at the national level combined with measles campaign and mass de-worming
Apr 2005 & Sept 2005	Mass vitamin A supplementation campaign at the national level combined with mass de-worming

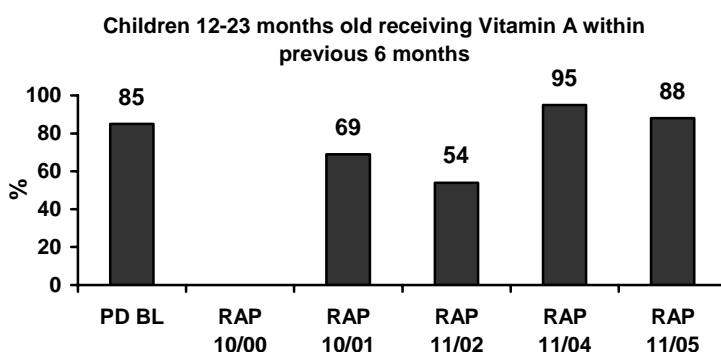
B. It is recommended that children receive vitamin A capsules every 6 months between the ages of 6- 59 months of age.

Project Results



Children 12-23 months old receiving Vitamin A within previous 6 months		
	%	N
DHS 97	n/a	n/a
DHS 03/04	79	1202
OD BL	n/a	n/a
OD EL	93	320
PD BL	85	600
PD EL	89	745

Trends over time



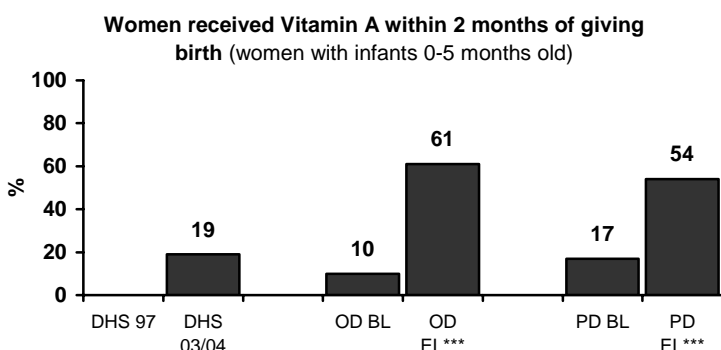
Children 12-23 months old receiving Vitamin A within previous 6 months		
	%	N
PD BL	85	600
RAP 10/00	n/a	n/a
RAP 10/01	69	197
RAP 11/02	54	180
RAP 11/04	95	320
RAP 11/05	88	320

Conclusions:

- At the time of end line, Vitamin A supplementation of children 12-23 months was high in all samples from project sites nearing 90%, due to the government's mass campaigns. Even at the time of baseline, in PD BL the coverage level was 85%.
- It should be noted that end line levels in project sites, 93% for OD EL and 89% for PD EL, are even higher than the national DHS 2003-04 level of 84%.

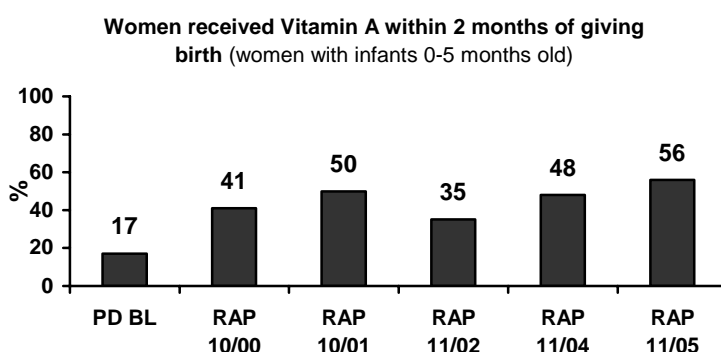
C. It is recommended that women receive vitamin A supplementation within 8 weeks of delivery.

Project Results



Vitamin A to women within 2 months of giving birth		
	%	N
DHS 97	n/a	n/a
DHS 03/04	19	3894
OD BL	10	370
OD EL	61	320
PD BL	17	319
PD EL	54	500

Trends over time



Vitamin A to women within 2 months of giving birth		
	%	N
PD BL	17	319
RAP 10/00	41	195
RAP 10/01	50	199
RAP 11/02	35	180
RAP 11/04	48	320
RAP 11/05	56	320

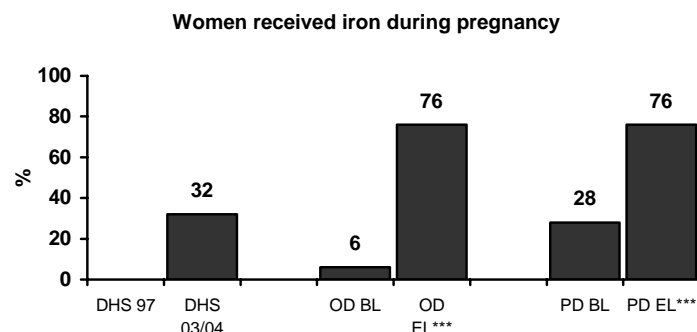
Conclusions:

- Post-partum supplementation of vitamin A shows a showed significant increases from 10% to 61% in ODs and from 17% to 54% in PDs (both with $p < 0.001$). The RAP trend data indicate that increases were rapid within the first 8 months from 17% to 41%.
- Results in project sites (54%) are also much higher than the DHS level (19%) with this possibly being due to improved health service delivery of post partum vitamin A resulting from the project's ENA training of health workers and community members. It should also be noted that even after the departure of partner groups in 2003 who had been working on the issue of drug supply and logistics in project sites, levels of post-partum vitamin A in the RAP 04 and RAP 05 were maintained. This suggests that the government has remained committed to continuing the delivery of vitamin A to post-partum mothers.
- However, levels of post-partum vitamin A never exceed more that 56% despite the fact that 75% of women deliver in health facilities. Further investigation of this 'gap' needs to be conducted to ascertain if it is an issue of supply or an issue of health workers not providing the service.

5. Control of Anemia and Malaria

A. It is recommended for pregnant women to receive iron/folate supplementation during 6 months.

Project Results



Women received iron during pregnancy		
	%	N
DHS 97	n/a	n/a
DHS 03/04 (<5yrs)	32	4162
OD BL	6	721
OD EL	76	304
PD BL	28	546
PD EL	76	476

Conclusions:

- Major increases are observed in iron/folate supplementation for pregnant women from a level of only 28% in the PD BL to a level of 76% in PD EL, and from 6% in the OD baseline to 76% in OD end line (both $p < 0.001$).
- These levels are much higher than the DHS 2003-04 level of 32%. As with vitamin A, this may also be due to improved government health service delivery as well as increased demand for these services in project sites arising from the ENA training and field approach.
- Of the pregnant women who received supplementation, 55% took it for less than 3 months, and 44% took it for 3 months or more. Thus, more work is needed to ensure that the complete dose over six months is taken.

B. It is recommended that pregnant women receive anti-malaria treatment

In project sites, pregnant women receiving chloroquine treatment during the last 3 months of her pregnancy reached 66% (n=476) in the PD EL and 74% (n=304) in OD EL. A different question was asked in the PD BL survey (did mother take chloroquine weekly during her last pregnancy) with a positive response of 27% (n=547). Unfortunately, this difference in the way the question was asked makes any trend analysis difficult. In addition, the question posed in the DHS was also different (did mother take "any anti-malarial during her last pregnancy"), with a positive response of 58%. However, it could be concluded that levels in project sites, both PD and OD, at the time of the end-line survey are higher than the national DHS level since these levels would even be higher if all women were included who took any type of anti-malarials, not just chloroquine during the last 3 months.

C. It is recommended that pregnant women receive de-worming tablets during the second or third trimester

Instituted at the end of 1999 as part of the national micronutrient guidelines, the level of de-worming for pregnant women reached 32% in PD EL (n=476) and 19% OD EL (n=304). No comparison data are available either from the baseline survey or from the DHS surveys.

D. It is recommended that children 12- 59 months receive de-worming tablets every 6 months.

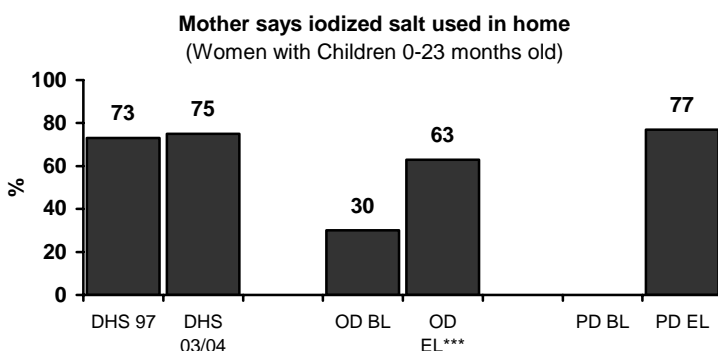
A significant increase in the level of de-worming in children 12-23 months was observed in project sites. The PD BL level was 42% (n=600) as compared to the PD EL 82% (n=745) ($p < 0.001$). The OD EL level was 91% (n=320), but there is no comparative OD BL data. It should be noted that since October 2004, de-worming of children has been implemented twice a year through mass campaigns with vitamin A. Unfortunately no comparison data are available from the DHS surveys.

6. Control of Iodine Deficiency Disorders (IDD)

A. It is recommended to use iodized salt at home.

The survey determined if mothers used iodized salt in their home cooking. In addition, when it was available at the time of the visit to the households during the survey, the family's salt supply was tested.

Project Results



Iodized salt used in home, according to mother		
	%	N
DHS 97	73	7171
DHS 03/04	75	8420
OD BL	30	1440
OD EL	63	960
PD BL	n/a	n/a
PD EL	77	1760

NB. DHS, 1996 & 1998 data for tested salt.
2005 data is based on mother claiming to use iodized salt.

Conclusions:

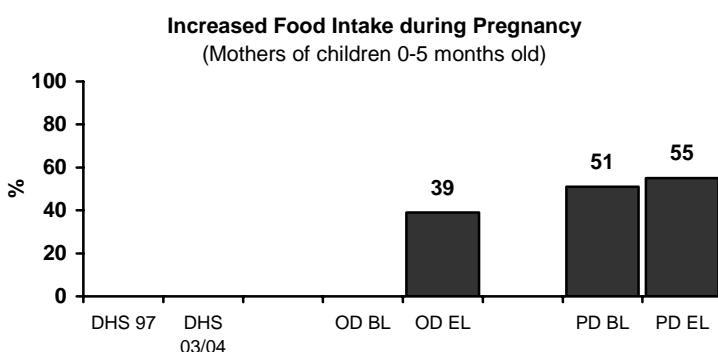
- The reported and confirmed availability of iodized salt varied according to the location of the community surveyed as iodized salt was not always available on the local market.
- The percent of households reporting they used iodized salt increased significantly from 30% to 63% in ODs ($p < 0.001$). Comparative data are not available from the PD BL.
- The levels of households using iodized salt in their cooking remained the same across the DHS 1997 and DHL 2003-04 at about 75% coverage.
- At end line, in project sites the level of 77% was similar to the DHS levels.

7. Women's Nutrition

Messages regarding women's nutrition emphasized increased feeding and dietary diversity during pregnancy and lactation. This study collected no information on the quality of the feedings and instead focused on changes in self-reported food intake.

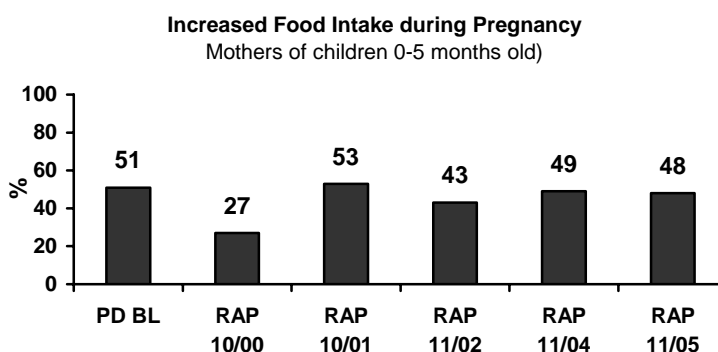
A. It is recommended that pregnant women eat one additional meal each day.

Project Results



Increased Food Intake during Pregnancy		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	n/a	n/a
OD EL	39	320
PD BL	51	320
PD EL	55	500

Trends over time



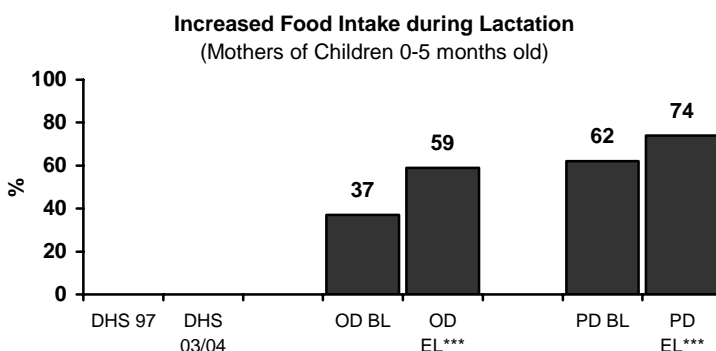
Increased Food Intake during Pregnancy		
	%	N
PD BL	51	320
RAP 10/00	27	195
RAP 10/01	53	199
RAP 11/02	43	180
RAP 11/04	49	320
RAP 11/05	48	320

Conclusions:

- During the end-line when asked if they ate more, the same or less during pregnancy, the results were similar to the baseline with only 55% reporting they ate more.
- No comparison data are available from the DHS surveys.
- As with the indicator on the nutritional care of sick children, the indicator used to assess women's nutritional practices during pregnancy is also highly subjective as it is based on the women's self-assessment of eating 'the same', 'more' or 'less'.

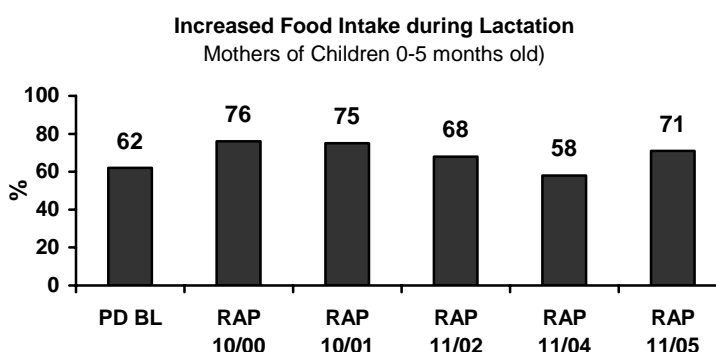
B. It is recommended that lactating women eat two additional meals each day.

Project Results



Increased Food Intake during Lactation		
	%	N
DHS 97	n/a	n/a
DHS 03/04	n/a	n/a
OD BL	37	369
OD EL	59	319
PD BL	62	320
PD EL	74	500

Trends over time



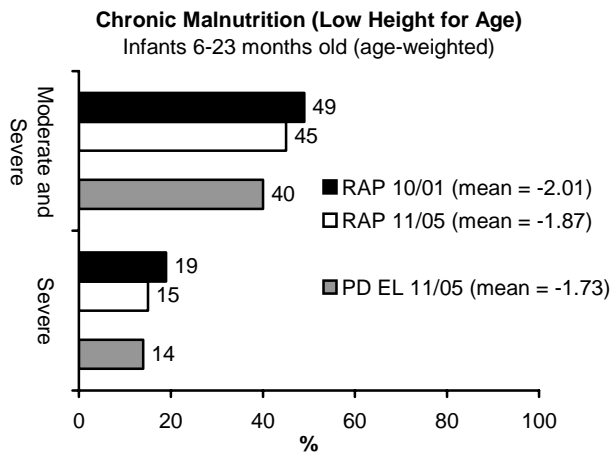
Increased Food Intake during Lactation		
	%	N
PD BL	62	320
RAP 10/00	76	195
RAP 10/01	75	199
RAP 11/02	68	180
RAP 11/04	58	320
RAP 11/05	71	318

Conclusions:

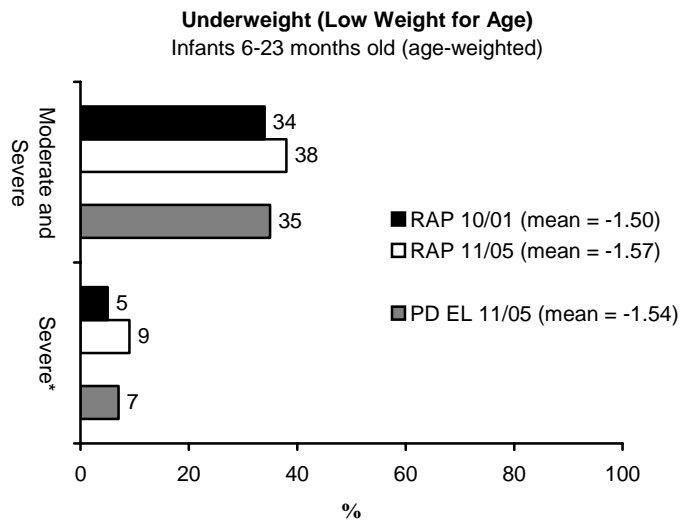
- There are strong positive improvements in women reporting they ate more during lactation, and these changes occurred rapidly within 8 months. As compared to baseline levels, a higher percentage of lactating women reported eating more at end line, from 37% to 59% in OD and from 62% to 74% in PD, both significant at the level of $p < 0.001$.
- As with other nutrition behaviors requiring continued practice over a period of time (e.g. exclusive breastfeeding), increased food intake by lactating mothers seemed to follow the intensity of project at the community level. Levels were higher during times when the project focused on communities activities as compared to when the project focused on provincial level activities.
- No comparison data were available from the DHS surveys.
- As with the indicator on the nutritional care of sick children, the indicator used to assess women's nutritional practices during lactation is also highly subjective as it is based on the women's self-assessment of eating 'the same', 'more' or 'less'.

8. Child Nutritional Status

A. Low height for age



B. Low weight for age



Conclusions:

- All surveys were conducted during the same month of the year, thus confounding issues of seasonality should not be an issue.
- The anthropometric data were weighted by age.
- The best indicator to examine for trends in improvements in nutritional status over time is height for age. As can be seen from the RAP 04 and RAP 05, there does appear to be an improving trend with declining stunting levels, from 49% (mean HAZ score of -2.01) to 45% (mean HAZ score of -1.87). However, these differences were not significant.
- The only significant result found was that there was an increase in severe underweight, from 5% to 9% between the RAP 04 and RAP 05 ($p < 0.05$).

9. IEC: Sources, Knowledge, and Practices

A.) Zaza Salama Health Card

There is no correlation between “possession of the Zaza Salama card or any other health card” with infant and child feeding behaviors. There are, however, strong correlations between possession of any kind of health card and health services reported to have been received, such as vitamin A capsules for mother and child, immunization, and iron tablets during antenatal care. This suggests that health cards are used for health service delivery; and it is unclear if it is used for counseling on child feeding.

B.) Source of messages (more than one response was recorded)

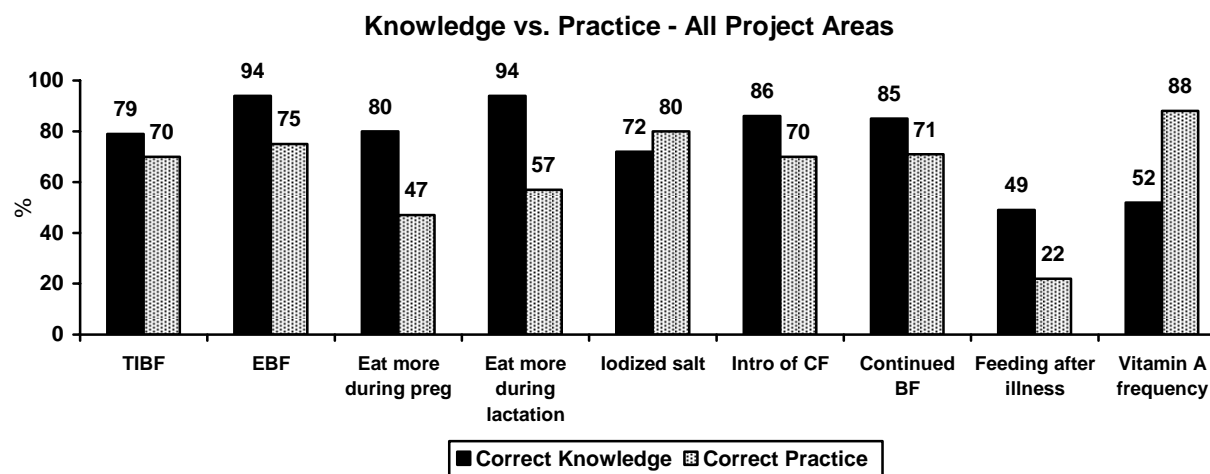
Sources of Nutrition Information (OD, PD, and RAP samples combined)

%	TIBF	EBF	Women's Nutrition	Continued BF	Frequency of Feeding	Dietary Diversity	Feeding after Illness	Vitamin A - Children	Iodized Salt
Heard message from health worker	65	60	42	38	17	27	14	38	34
Heard message from Community workers	9	12	10	12	8	15	6	19	10
Heard message from Poopy	3	9	2	12	n/a	8	n/a	n/a	n/a

Conclusions:

- Overwhelmingly the key source of information for all of the ENA messages is health workers. This reinforces their important role in Madagascar for providing nutrition messages to mothers.
- Concerning exclusive breastfeeding messages, only 12% of mothers cited community workers as their primary source of information, as compared to 9% citing Poopy, the pop singer and country ambassador for ENA.

C.) Knowledge versus Practice (OD, PD and RAP samples combined)



Conclusions:

- Knowledge of key ENA behaviors is very high, between about 80% to 94% for all the ENA messages listed, apart from feeding of sick children after illness (only 49% knew the message) and frequency of vitamin A supplementation for children (52%). Practice for this latter ENA message was higher since the majority of children are reached through the twice-yearly mass campaigns.
- The greatest discrepancy between knowledge and practice is the area of women's nutrition, whereas most women knew they should eat more during pregnancy and lactation, only 47% and 57%, respectively, did so.

D.) Contacts Points

When health workers were cited as a source of information, the messages heard at each contact point are shown in the table below.

	%	TIBF	EBF	Women's Nutrition	Feeding Frequency	Dietary Diversity	Feeding after Illness	Vitamin A for Children	Iodized Salt
Where message was given (contact point)	ANC Group	50	51	37	21	20	14	10	49
	ANC Individual	16	7	12	7	7	4	3	12
	Delivery	37	21	11	3	4	1	2	3
	PN/Family Planning	0	0	1	1	1	0	0	1
	Immunization	7	23	48	62	60	47	56	27
	GM/P	2	5	14	26	25	19	23	11
	IMCI	1	2	4	7	12	39	14	10
	Home Visit	1	1	1	1	1	1	3	1

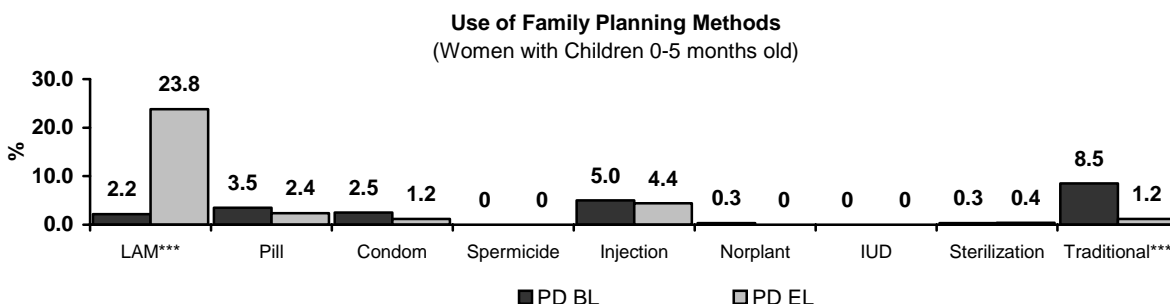
Conclusions:

- Most of the messages are giving at the appropriate time as example TIBF during ANC and delivery and feeding of the sick child during IMCI visit.
- However, it seems that there are still many missed opportunities; in most of the cases, messages are given to no more than half of the mothers.

10. Family Planning and LAM

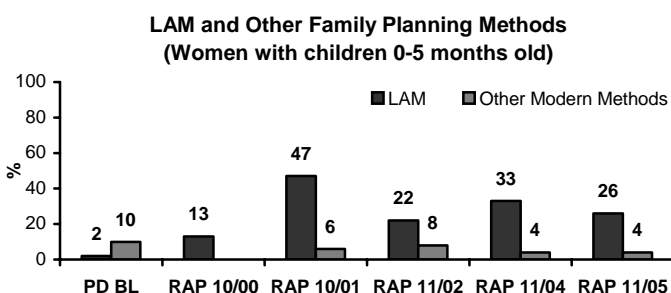
It is recommended for breastfeeding women with children from 0 – 5 months to use LAM as a method of family planning.

Project Results

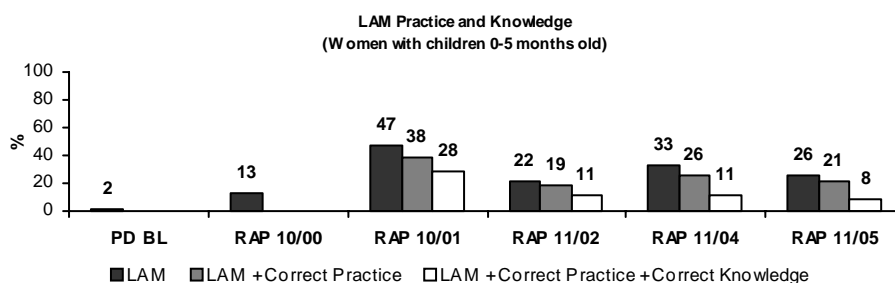


Note: PD BL (n= 318) and PD EL (n=500 in PD EL). No baseline conducted in OD, thus data are not presented

Trends over time



LAM method among women with children under 6 months old		
	%	N
PD BL	2	318
RAP 10/00	13	195
RAP 10/01	47	199
RAP 11/02	22	180
RAP 11/04	33	320
RAP 11/05	26	500



* Correct Practice: child < 6months + amenorrhea + EBF

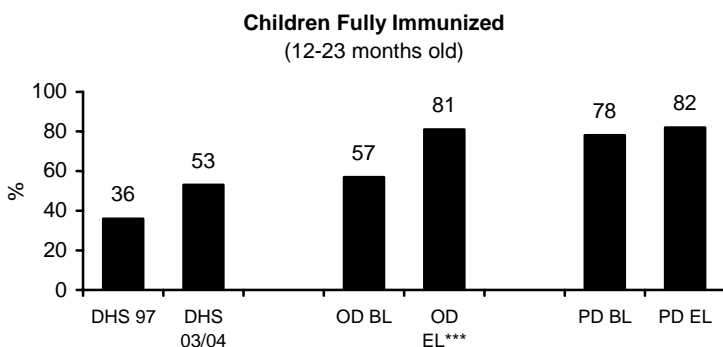
Conclusions:

- LAM as a family planning method shows a major increase over time from 2% in PD BL to 24% in PD EL (p<0.001). The sample included women of all ages with infants 0-6 months. Traditional methods dropped significantly from 8.5% to 1.2%, which is probably an artifact in how LAM has been classified over time. At the time of the baseline, it was classified as a traditional method, but is now classified as a modern method.
- As with longer-term behaviors, such as exclusive breastfeeding, there appears to be a relationship between levels of LAM uptake and project intensity at the community level.
- DHS 2003-04 results show a knowledge of LAM at 38% among only women of reproductive age (15-49 years) and 27% among men. Among women in childbearing age, 5.7% said they have used LAM, and 1% are currently using LAM as a modern FP method. Data on LAM were not collected during the DHS 1997.

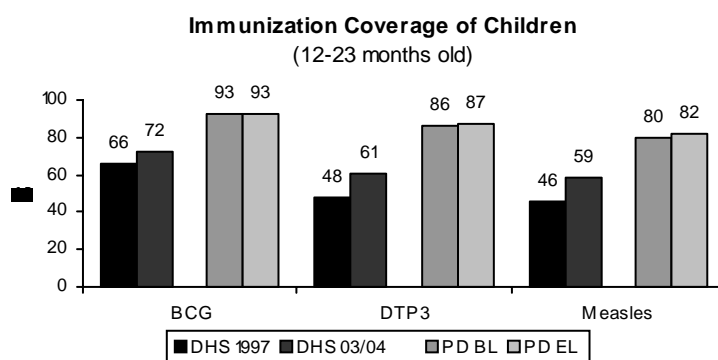
11. Immunization Coverage

It is recommended to fully immunize your child before its first birthday.

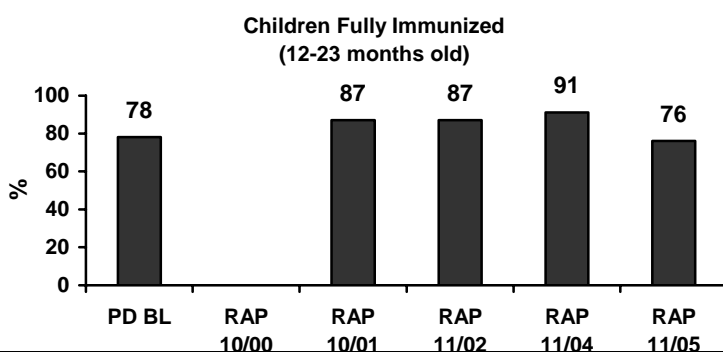
Project Results



Children 12-23 months old fully immunized		
	%	N
DHS 97	36	1209
DHS 03/04	53	1287
OD BL	57	720
OD EL	81	319
PD BL	78	600
PD EL	82	745



Trends over time



Children 12-23 months old fully immunized		
	%	N
PD BL	78	600
RAP 10/00	n/a	n/a
RAP 10/01	87	217
RAP 11/02	87	180
RAP 11/04	91	320
RAP 11/05	76	320

Conclusions:

- Levels of fully immunized children are high in project areas, 81-82%, and higher than the national DHS 2003-04 level of 53%. Similarly, the levels of BCG, DPT3 and measles coverage are higher than the DHS
- There is also no change in dropout rate between baseline and end-line surveys in either ODs or PDs.
- Looking at trends overtime, it seems that rates of fully immunized children were higher from 2001 to 2004 compared to the RAP 05.

IV. Conclusions

As has been shown, the work undertaken by LINKAGES in Madagascar has documented major improvements across all key ENA areas at once, spanning from infant feeding to micronutrients to women's nutrition. In addition, improvements in family planning were achieved through the increased uptake of LAM.

A separate study, described in more detail in Annex 7, was carried out by LINKAGES¹³ to analyze the cost effectiveness Madagascar's infant and young child feeding program within the context of ENA. The indicators used to measure effectiveness were: 1) exclusive breastfeeding (EBF); 2) timely initiation of breastfeeding (TBF); 3) use of Lactational Amenorrhea as a method of family planning (LAM); 4) complementary feeding (CF); 5) increased frequency of breastfeeding for sick children (FSC); and, 6) increased eating for breastfeeding women (MN). The key findings are: 1) there is a positive relationship between the costs incurred per beneficiary and the behavior change outcomes; 2) the cost of training and mass media activities are the key cost drivers; 3) the cost of replicating the package of activities to promote EBF, TIBF, and LAM is \$6.23 per targeted child, while the cost per new EBF, TIBF, and LAM acceptor are \$10.09, \$2.33 and \$4.44, respectively; 4) LINKAGES may be able to increase its cost effectiveness by selecting areas with large target populations and low rates of the targeted behaviors; and, 5) LINKAGES' program in Madagascar appears to be cost effective with an average cost per new EBF acceptor of \$10, compared with data from Ghana and Brazil showing cost per new EBF acceptor to be \$34 and \$59, respectively. Further work to study the economies of scale and scope for these types of interventions, as well as their sustainability or longevity, would be helpful to improving cost effectiveness. Further analysis of the data published elsewhere¹⁴ also indicates that the approach taken by LINKAGES in Madagascar is highly cost effective. At a cost of \$30.77 per disability-adjusted life year (DALY), LINKAGES program in Madagascar to promote breastfeeding with the context of ENA compares favorably with other health interventions, \$14.50 for immunization, \$25.00 for family planning, and \$40 for integrated management of childhood illness. The DALY level of \$30.77 is also well below the benchmark of \$100/DALY, which is considered by the World Bank as the upper limit of cost effective programs in low income countries.

There are, however, still areas for improvement that warrant further attention by nutrition groups working in Madagascar. Certainly more work is needed to address the problem of the nutrition care of the sick child, particularly the areas of increased breastfeeding after illness and increased complementary feeding during and after illness. These behaviors appear to be very difficult to change, particularly the latter. Feeding sick children is difficult because of the anorexia that typically ensues when children fall ill. In addition, more attention is needed to promote women's nutrition, particularly improved feeding during pregnancy, an area where little progress has been made, either in Madagascar or elsewhere. The lack of progress seen in LINKAGES sites on improving women's nutrition is most likely the result of less attention being given to this topic as the primary focus was on breastfeeding and complementary feeding practices. Lastly, further work is needed to develop more effective messages and appropriate field strategies to improve complementary feeding which is a recognized to be a challenging area. More study is needed on the obstacles preventing mothers from adequately feeding the necessary types and amounts of complementary foods to their children 6-23 months. What is needed is information on the relative contribution of factors such as access, availability, and utilization issues, which in turn would inform future complementary feeding messages and field approaches.

Additional work is needed to improve the indicators to assess complementary feeding, as well as the nutritional care of the sick child and women's nutrition. The work undertaken by LINKAGES in Madagascar has helped to contribute to the knowledge base to develop better indicators, but more effort will be needed in the future to identify feasible and less subjective measurements.

¹³ From Chee, Grace, Kimberly Smith, Marty Makinen, Zo Rambeloson. June 2004. *Cost and Effectiveness Analysis of LINKAGES' Infant and Young Child Feeding Program in Madagascar*. Bethesda, MD: Abt Associates Inc.

¹⁴ *Experience LINKAGES: Cost and Effectiveness*, Academy for Educational Development, November 2005

Annex 1:
Supplement to
The Story of LINKAGES-AED in Madagascar: Using the Essential Nutrition Actions to Improve the
Nutrition of Women and Children 1997- 2004, by A. Guyon, V. Quinn, P. Rahantarina, S.
Rakotorinina, and V. Ravelojoana. The LINKAGES Project, AED, 2004

Activity Update, October 2004 to March 2006

The GAIN

National GAIN

- 20 meetings with 384 participants, mainly to support the National Nutrition Policy development and its implementation.
- 2 workshops with 200 participants to support the National Nutrition Policy.
- 10 meetings with 50 participants, mainly to support the National Community Nutrition Policy development (Strategy N° 2 of PNAN).
- 5 workshops with 79 participants to support the National Community Nutrition Policy.
- 19 meetings with 110 participants, mainly to support the Strategy of Communication development (Strategy N° 8 of PNAN).
- 3 workshops with 31 participants to support Communication.
- workshops with 31 participants to strengthen Breastfeeding activities.
- 1 training with 30 participants on Complementary Feeding practices.
- 7 meetings mainly to support the National Child Health Policy development.
- workshops to support the National Child Health Policy.

Regional GAINS

- 4 regional GAIN are currently functional (Antananarivo, Fianarantsoa, Mahajanga, Tulear).
- 7 regional GAIN meetings with 331 participants
- workshops with a total of 80 participants on the National Community Nutrition Policy (PNAN).
- trainings with a total of 59 participants on National Community Nutrition Policy (PNAN)
- 1 training with 23 participants on Complementary Feeding practices.

ENA training manuals and *Gazety* newsletters

Original versions underwent technical revision to incorporate up-to-date guidelines on complementary feeding with breastfeeding 6-23 months following "WHO Guiding Principles on Complementary Feeding and to incorporate messages to the Malagasy context.

Profiles

- 18 participants participated to the update of *Profiles* that was co-funded by USAID-Office National de Nutrition and UNICEF
- 50 persons attended the first *Profiles* presentation in December 2005

Poopy as ENA ambassador

- 2 additional songs were written and produced in addition to the previous songs on the nutritional care of the sick child as well as community women's groups
- 4 concerts with 6 300 persons.
- 2 press conferences organized for 78 journalists to promote Breastfeeding, Complementary Feeding, and Feeding of the Sick Child.

Mass media campaign

- 2 mass media campaigns carried out from
 - 6th June 2005 to 16th October 2005 , and
 - 12th December to 16th December 2005 (World Breastfeeding Week activities)
- 2 to 10 messages per day on CF during 117 days broadcasted on 1-5 radio stations
- 1-3 messages per day on CF during 117 days broadcasted on 1-3 TV stations
- 15 radio stations involved
- 6 TV stations involved

Follow-up of the Baby Friendly Hospitals (BFH)

- Self-assessment and monthly self-training were initiated in 2000.
- 2006 follow-up of the 10 steps of the 11 initial BFH showed:
 - in 2000 before support began the average for the 10 steps was 67%, and after three years of intensive support it reached 85%; after stopping support in 2003, this level dropped to 75% by the time the assessment was carried out in 2006.
 - Self-learning training manual (4 modules), *Gazety*, and counseling cards were provided
- Some hospitals improved from the earlier stage of the initiative, others never made any improvement, and therefore much of the improvement depends on the commitment of hospital staff.
- The MOH expanded this strategy to all the 73 existing BFH, and distributed the self-training manual, but was unable to carry out follow-up visits in an intensive manner. However, the follow-up in 17 hospitals in 2003 and 2006 seems to show an improvement as the average of the 10 steps was 80%, higher than the original baseline at 67%.

Follow-up of the Baby Friendly Workplaces

- Currently, there are 11 Baby Friendly Workplaces. The follow-up done in four of the workplaces shows that most of them are still functioning but that they need closer supervision to reach a score above the 50% that was found. In particular, the counseling part of peer-to-peer communication needs to be re-enforced.

Pre-Service training in two medical schools and seven training institutions for nurse/mid-wives

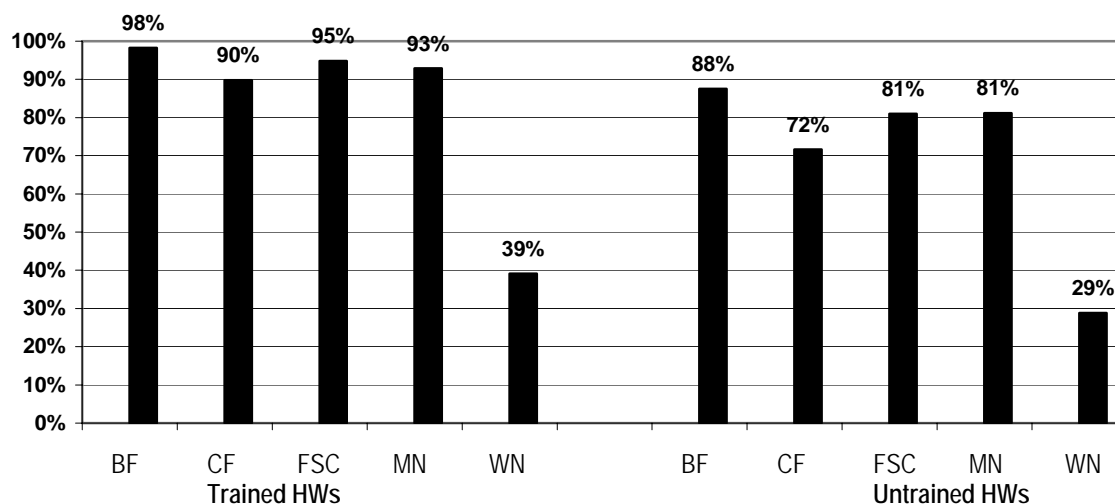
- 112 instructors, tutors, teachers from 2 medical school and 4 para-medical school participated in the introduction of the self learning module on ENA
- 4 pre-service training institutions in 3 provinces were visited two times
- 47 practicum sites in 3 provinces were followed-up
- 165 students from the third year of 4 paramedical school were tested on ENA knowledge
- 1 consultant was hired to support the activity planning for the ENA and IMCI integration to the pre-service training curricula
- 2 instructors from Tana medical school and the public health school attended the Training of Trainers Regional Workshop held in Addis Ababa on "ENA Technical" in March 2006

Training of Health Workers (HW)

There were different types of ENA training initiated between October 2004 and March 2006.

- 241 HW attended the 1 day introduction to the ENA self-learning training manual
- 124 HW attended the 5 day training on ENA self-learning training manual
- 468 HW from health facilities in the focus districts were trained in Complementary feeding practices
- 99 ENA self-learning training manuals (two modules) were distributed
- 136 follow-up visits were carried in health facilities

Follow-up on knowledge HWs trained and not trained (7 months post-training)



Training Assessment Findings:

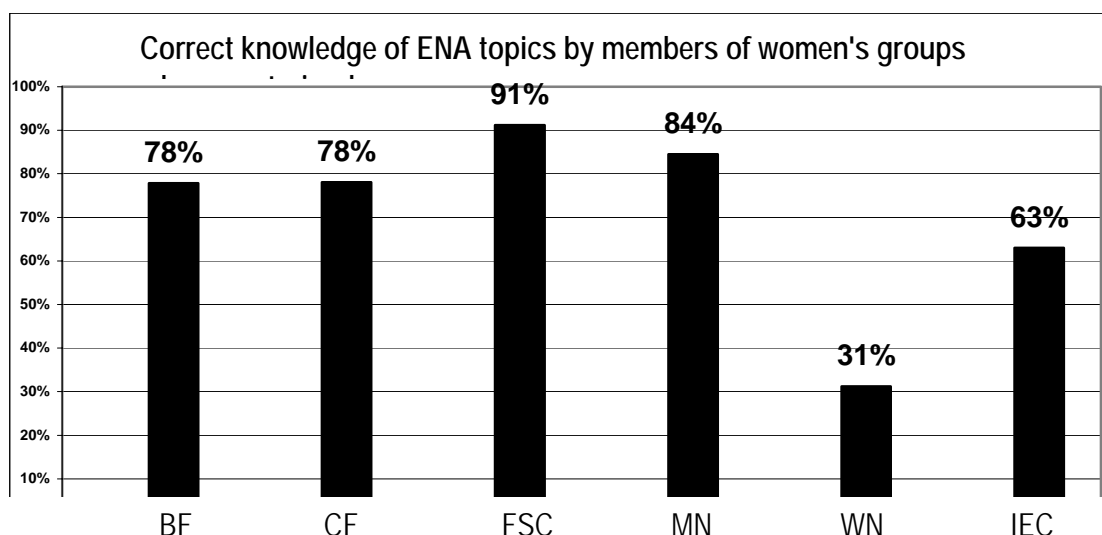
- An assessment of knowledge 6 months post-training was carried out for health workers. The overall finding shows that HWs trained in ENA have a high level of knowledge as well as better knowledge than those who were not trained.
- The lowest score in knowledge was for women's nutrition, as the last specific training on this subject was carried out few years ago.
- HWs' knowledge on BF remained very high, even with their recent training focusing on CF/FSC/MN, probably because BF support through training/mass media have been done for a long time since the project began in 2000
- It is expected that trained HWs, coming back from training will train their colleagues with whom they work in the health facilities. It appears that the untrained HWs were exposed to the information, as their knowledge is relatively high, but not as high as if they had undergone the ENA training course themselves.

Training of members of Women's Groups (WG)

There were different types of ENA training for members of women's groups initiated from October 2004 to March 2006.

- 1,173 members of women's groups the focus districts were trained in Complementary Feeding practices
- 168 follow-up visits were carried in health facilities when members of women's groups were leading animation sessions
- 35,670 *Gazety* and 1,553 large Family Health Cards were distributed to women's groups
- 8 festivals were held in focus districts

Follow-up of Knowledge for member's of women's groups



Training Assessment Findings:

- An assessment of the knowledge of members of women's groups who were trained was carried out 6 months post-training
- The knowledge of the community members is high except for women's nutrition.
- IEC represents the use of Family Health Cards and Negotiation Techniques
- The knowledge on BF is relatively low, probably due the fact that the last trainings focused on CF/FSC/MN, with the implication that community members need more continuous training than health workers

Note: FSC denotes feeding of the sick child; WN denotes women's nutrition

Annex 2:

History of the RAP in Madagascar

In October 2000, after 9 months of implementation of Phase II, the first RAP was conducted to assess results related to breastfeeding and LAM. The RAP 2000 demonstrated the effectiveness of the strategies adopted by LINKAGES and its partners in terms of improved breastfeeding practices and increased knowledge of LAM, thus validating their implementation on a larger scale. This eventually led in 2001 to 13 more districts being included alongside the initial 10 for a total of 23 districts covering a population of more than 6 million.

While in 2000 LINKAGES training activities focused upon exclusive breastfeeding to 6 months and LAM, in 2001 training activities emphasized young child nutrition, particularly complementary feeding and the feeding of the sick child, as well as maternal nutrition and vitamin A supplementation.

In October 2001, after 21 months of implementation, the project conducted another RAP in the 10 focus districts to assess trends in knowledge and practices related to LINKAGES and JSI's interventions. In addition, the RAP 2001 included a qualitative assessment of the perceptions of health workers, members of women's groups, and women with infants older than 5 months of young child nutrition. As with the RAP 2000, results from the RAP 2001 further demonstrated the effectiveness of the strategy adopted in terms of improving breastfeeding, complementary feeding, and the other essential nutrition actions.

In addition to surveying the 10 focus districts, the RAP 2001 also included an over-sampling in two original districts, Antsirabe II and Fianrantsoa II, where the initial input into community behavior change activities was intensive, to assess if levels of key indicators could be maintained and even increased during the process of 'going to scale' using the less intensive approach employed by LINKAGES and JSI as compared to the pilot phase. The RAP 2001 results showed that this was indeed possible.

In October 2002, the project continued the annual assessment of knowledge and practices in the 10 focus districts, however, the purpose of the RAP 2002 to assess levels of key indicators following a long period of inactivity when the project was forced in October 2001 to temporarily discontinue work for nearly one year due to the political crisis. The intent of the RAP 2002 was to explore how durable breastfeeding and other key behaviors were when outside support was terminated.

In 2003, as the Demographic and Health Survey was being carried out, the RAP annual assessment was not conducted.

In November 2004, the general aim of the RAP was to assess the effectiveness of the project's behavior change strategy, particularly the new provincial approach. In addition, the results related to the feeding of infants 6 to 23 months will be used in subsequent RAP to assess the effectiveness of an intensified effort being planned from early 2005 onwards to improve the complementary feeding and breastfeeding of children 6 months and above, as well as the feeding of sick children.

The RAPs 2000, 2001, and 2002 were conducted in the same *communes* of the LINKAGES/JSI 10 focus districts. The RAP 2004 and 2005 were conducted these same *communes* however only in 8 focus districts as activities in 2 of the original 10 focus districts, Betafo and Antananrivo Ville, were discontinued due to field constraints.

An overview of the districts sampled in the different RAP surveys each year is shown in the following table.

SURVEY:	RAP Oct 2000	RAP Oct 2001	RAP Oct 2002	RAP Nov 2004	RAP Oct 2005
Ambohimahasoa	X	X	X	X	X
Ambositra	X	X	X	X	X
Antananarivo Nord	X	X	X	X	X
Antananarivo Sud	X	X	X	X	X
Antsirabe I	X	X	X	X	X
Fianarantsoa I	X	X	X	X	X
Fianarantsoa II	X	X	X	X	X
Antsirabe II	X	X	X	X	X
Betafo	X	X	X		
Antananarivo Ville	X	X	X		

Annex 3A:
QUESTIONNAIRE FOR MOTHERS OF A CHILD AGED 0 TO 5.9 MONTHS
WHO ARE NOT MEMBERS OF WOMEN'S GROUP

SUPERVISOR _____ SURVEYOR _____

REGION _____ SSD _____ COMMUNE _____

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
Date of the interview	____/____/05	____/____/05	____/____/05	____/____/05	____/____/05
1. Starting time	____:____	____:____	____:____	____:____	____:____
2. Name of the village of residence	_____	_____	_____	_____	_____
3. Number of people in household (sharing the same food)	_____	_____	_____	_____	_____
a. Children under 5	_____	_____	_____	_____	_____
b. Other (more than 5)	_____	_____	_____	_____	_____
4. Name by which the child is called	_____	_____	_____	_____	_____
5. Does he/she have a health card?					
a. Zaza salama (please show)	[a]	[a]	[a]	[a]	[a]
b. Other (show)	[b]	[b]	[b]	[b]	[b]
d. No	[d]	[d]	[d]	[d]	[d]
6. the child is Male or Female (M or F)	_____	_____	_____	_____	_____
a. Child's birth date	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
b. Child's age in months	_____	_____	_____	_____	_____

MY FIRST QUESTIONS PERTAINS TO YOU, THE MOTHER

7. While you were pregnant of (<i>child's name</i>) how was the amount of food you ate?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
d. Less than usual	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
8. Did you go to antenatal consultations during pregnancy?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No(<i>Go to question 11</i>)	[b]	[b]	[b]	[b]	[b]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
9. If Yes, how many times?					
a. 4 or more	[a]	[a]	[a]	[a]	[a]
b. 1-3	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
10. What among the followings did you get during antenatal consultations?					
10.1 Iron/folic acid					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>Go to question 10.3</i>)	[b]	[b]	[b]	[b]	[b]
d. Does not know (<i>Go to question 10.3</i>)	[d]	[d]	[d]	[d]	[d]
10.2 If Yes, for how many months did you take IFA?					
a. Less than 3 months	[a]	[a]	[a]	[a]	[a]
b. 3-6 months	[b]	[b]	[b]	[b]	[b]
d. More than 6 months	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
10.3 Deworming Medicine					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
10.4 Did you take chloroquine during the last three months of pregnancy?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
11. Where did you deliver (<i>child's name</i>)?					
a. Health facility (or with assistance from health worker)	[a]	[a]	[a]	[a]	[a]
b. Elsewhere	[b]	[b]	[b]	[b]	[b]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
12. Within 2 months after delivery , did you take Vitamin A ? a. Yes b. No d. Does not know	[a] [b] [d]	[a] [b] [d]	[a] [b] [d]	[a] [b] [d]	[a] [b] [d]
13. Are your menses back since (<i>child's name</i>)' birth? a. Yes b. No	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
14. How long after delivering (<i>child's name</i>) did you start breastfeeding? a. Within one hour after b. Within the day d. Next day e. Several days after f. Does not know g. Did not breastfeed at al (<i>Go to question 19</i>)	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]
15. Are you still breastfeeding (<i>child's name</i>) now? a. Yes b. No (<i>Go to question 19</i>)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
16. Now that you are still breastfeeding, how is the amount of food you eat ? a. More than usual b. As usual d. Less than usual e. Does not know	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
MY NEXT QUESTION IS ON HOW YOU FEED YOUR CHILD					
<p>17. Yesterday at day and nigh, how many times did you breastfeed (<i>child's name</i>)?</p> <p>a. Ten times or more</p> <p>b. Less than ten times</p> <p>d. Does not breastfeed anymore</p> <p>e. Does not know</p>	[a]	[a]	[a]	[a]	[a]
	[b]	[b]	[b]	[b]	[b]
	[d]	[d]	[d]	[d]	[d]
	[e]	[e]	[e]	[e]	[e]
<p>18. Yesterday at day and nigh, besides breast milk what else did you give (<i>child's name</i>)? (<i>Read the list and check all answers</i>)</p> <p>a. Water</p> <p>b. Sweetened water</p> <p>d. Rice soup</p> <p>e. Fruit juice</p> <p>f. Tea (or herbal tea)</p> <p>g. Fresh milk</p> <p>h. Powdered or condensed milk</p> <p>i. Coffee</p> <p>j. Other fluids</p> <p>k. Solid or mashed food</p> <p>l. Nothing</p>	[a]	[a]	[a]	[a]	[a]
	[b]	[b]	[b]	[b]	[b]
	[d]	[d]	[d]	[d]	[d]
	[e]	[e]	[e]	[e]	[e]
	[f]	[f]	[f]	[f]	[f]
	[g]	[g]	[g]	[g]	[g]
	[h]	[h]	[h]	[h]	[h]
	[i]	[i]	[i]	[i]	[i]
	[j]	[j]	[j]	[j]	[j]
	[k]	[k]	[k]	[k]	[k]
	[l]	[l]	[l]	[l]	[l]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
MY NEXT QUESTION IS ON (CHILD'S NAME)'S HEALTH					
19. During the last two weeks, has (child's name) been sick? a. Yes b. No (<i>Go to question 24</i>)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
20. If YES, what was the problem? a. Diarrhea b. Fever d. Cough/ difficult breathing e. Other disease	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]
21. During illness, how was (child's name) breastfed? a. More than usual b. As usual d. Less than usual e. Not at all f. Does not know g. Is no longer breastfed	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]	[a] [b] [d] [e] [f] [g]
22. Is (child's name) still sick at this time? a. Yes (<i>Go to question 24</i>) b. No	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
23. If NO, after illness, how many times was (child's name) breastfed in a day (day and night)? a. More than usual b. As usual d. Less than usual e. Is no longer breastfed	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]	[a] [b] [d] [e]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
<i>NOW, I'D LIKE TO TALK ABOUT FAMILY PLANNING WITH YOU</i>					
24 Do you currently use a family planning method?					
a. LAM	[a]	[a]	[a]	[a]	[a]
b. Pills	[b]	[b]	[b]	[b]	[b]
d. Condoms	[d]	[d]	[d]	[d]	[d]
e. Spermicides	[e]	[e]	[e]	[e]	[e]
f. Injection	[f]	[f]	[f]	[f]	[f]
g. Norplant	[g]	[g]	[g]	[g]	[g]
h. IUD	[h]	[h]	[h]	[h]	[h]
i. Surgical (tubal ligation/ vasectomy)	[i]	[i]	[i]	[i]	[i]
j. Other	[j]	[j]	[j]	[j]	[j]
k. Does not use	[k]	[k]	[k]	[k]	[k]
25. Do you use LAM?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
26. According to you , is LAM an efficient family planning method?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
27. What are the conditions a woman must meet for LAM to be an efficient family planning method? (Check all answers)					
a. Menses are not back	[a]	[a]	[a]	[a]	[a]
b. Practices exclusive breastfeeding	[b]	[b]	[b]	[b]	[b]
d. Child is less than six months	[d]	[d]	[d]	[d]	[d]
e. Other	[e]	[e]	[e]	[e]	[e]
f. Does not know	[f]	[f]	[f]	[f]	[f]
28. Have you seen or heard spots or advertisements on LAM? (Check all answers)					

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
a. TV	[a]	[a]	[a]	[a]	[a]
b. Radio	[b]	[b]	[b]	[b]	[b]
d. Taxi-brousse	[d]	[d]	[d]	[d]	[d]
e. Taxi be	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
g. No	[g]	[g]	[g]	[g]	[g]
NOW, I'D LIKE TO TALK WITH YOU ABOUT YOUR KNOWLEDGE OF BREASTFEEDING					
29. According you, how long after birth should the baby start breastfeeding?					
a. One hour or less	[a]	[a]	[a]	[a]	[a]
b. Within the day	[b]	[b]	[b]	[b]	[b]
d. The next day	[d]	[d]	[d]	[d]	[d]
e. Several days after	[e]	[e]	[e]	[e]	[e]
f. Does not know (<i>Go to question 31</i>)	[f]	[f]	[f]	[f]	[f]
30. Where or from whom did you learn this? (<i>Check all answers</i>)					
a. Health workers	[a]	[a]	[a]	[a]	[a]
1. Sensitization during antenatal consultation	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during antenatal consultation	[2]	[2]	[2]	[2]	[2]
3. During delivery or post-delivery care	[3]	[3]	[3]	[3]	[3]
4. Group sensitization during medical visits after delivery	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation during medical visits after delivery	[5]	[5]	[5]	[5]	[5]
6. Family planning visits	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Growth Monitoring and Promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animators	[b]	[b]	[b]	[b]	[b]
d. Family members, friends	[d]	[d]	[d]	[d]	[d]
e. Poopy	[e]	[e]	[e]	[e]	[e]
f. Gazety (health bulletin)	[f]	[f]	[f]	[f]	[f]
g. Health card	[g]	[g]	[g]	[g]	[g]
h. Other	[h]	[h]	[h]	[h]	[h]
31. According to you for how long should a baby be exclusively breastfed?					
a. Number of months	_____v	_____v	_____v	_____v	_____v

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
b. Does not know	[b]	[b]	[b]	[b]	[b]
32. According to you, how many times a day (day and night) should a baby be breastfed?					
a. Less than ten times	[a]	[a]	[a]	[a]	[a]
b. Ten times or more	[b]	[b]	[b]	[b]	[b]
d. Does not know (<i>Go to question 34</i>)	[d]	[d]	[d]	[d]	[d]
33. Where or from whom did you learn that? (<i>Check all answers</i>)					
a. Health workers	[a]	[a]	[a]	[a]	[a]
1. Sensitization during antenatal consultation	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during antenatal consultation	[2]	[2]	[2]	[2]	[2]
3. During delivery or post-delivery care	[3]	[3]	[3]	[3]	[3]
4. Group sensitization during medical visits after delivery	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation during medical visits after delivery	[5]	[5]	[5]	[5]	[5]
6. Family planning visits	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Growth Monitoring and Promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animators	[b]	[b]	[b]	[b]	[b]
d. Family members, friends	[d]	[d]	[d]	[d]	[d]
e. Poopy	[e]	[e]	[e]	[e]	[e]
f. Gazety (health bulletin)	[f]	[f]	[f]	[f]	[f]
g. Health card	[g]	[g]	[g]	[g]	[g]
h. Other	[h]	[h]	[h]	[h]	[h]
34. According to you, how much should a woman eat during pregnancy?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
d. Less than usual	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
35. According to you, how much should a woman eat during lactation?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
d. Less than usual	[d]	[d]	[d]	[d]	[d]
e. Does not know (<i>Go to question</i>	[e]	[e]	[e]	[e]	[e]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
37)					
36. Where or from whom did learn that? (Check all answers) a. Health workers 1. Sensitization during antenatal consultation 2. Individual counseling during antenatal consultation 3. During delivery or post-delivery care 4. Group sensitization during medical visits after delivery 5. Individual negotiation during medical visits after delivery 6. Family planning visits 7. Immunization 8. Growth Monitoring and Promotion 9. Sick child visits 10. Home visits 11. Other (specify) b. Health animators d. Family members, friends e. Poopy f. Gazety (health bulletin) g. Health card h. Other	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [d] [e] [f] [g] [h]
NOW, I WOULD LIKE TO ASK YOU QUESTIONS ABOUT HYGIENE					
37 Yesterday , did you wash your hands each time you prepared food? a. Yes b. No (Go to question 39)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
38 If YES, did you use soap each time you washed your hands? a. Yes b. No	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
39 Yesterday , did you wash your hands each time you breastfed (<i>child's name</i>)? a. Yes b. No (Go to question 41)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
40 If YES, did you use soap each time you washed your hands? a. Yes b. No	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
NOW, I WOULD LIKE TO ASK YOU QUESTIONS ABOUT SALT.					
41. According you, what kind of salt should the family use for its health?					
a. Iodized salt	[a]	[a]	[a]	[a]	[a]
b. Other	[b]	[b]	[b]	[b]	[b]
d. Does not know	[d]	[d]	[d]	[d]	[d]
42. Do you use iodized salt?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. Does not know	[b]	[b]	[b]	[b]	[b]
43. Where or from whom did learn that? (Check all answers)					
a. Health workers	[a]	[a]	[a]	[a]	[a]
1. Sensitization during antenatal consultation	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during antenatal consultation	[2]	[2]	[2]	[2]	[2]
3. During delivery or post-delivery care	[3]	[3]	[3]	[3]	[3]
4. Group sensitization during medical visits after delivery	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation during medical visits after delivery	[5]	[5]	[5]	[5]	[5]
6. Family planning visits	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Growth Monitoring and Promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animators	[b]	[b]	[b]	[b]	[b]
d. Family members, friends	[d]	[d]	[d]	[d]	[d]
e. Poopy	[e]	[e]	[e]	[e]	[e]
f. Gazety (health bulletin)	[f]	[f]	[f]	[f]	[f]
g. Health card	[g]	[g]	[g]	[g]	[g]
(End of survey on child 0 to 6 months) Ending time	____:____	____:____	____:____	____:____	____:____

Annex 3B:

QUESTIONNAIRE FOR MOTHERS OF CHILDREN AGED 6 to 11.9 MONTHS NON-MEMBERS OF WOMEN'S GROUPS

SUPERVISOR _____ INTERVIEWER _____

PROVINCE _____ SSD _____ COMMUNE _____

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
Date of interview	___/___/05	___/___/05	___/___/05	___/___/05	___/___/05
1. Starting time	___:___	___:___	___:___	___:___	___:___
2. <i>Fokontany</i> of residence	_____	_____	_____	_____	_____
3. Number of people in the household (sharing the same food)	_____	_____	_____	_____	_____
a. Child under 5 years	_____	_____	_____	_____	_____
b. People aged from 5 years on	_____	_____	_____	_____	_____
4. Common name of child	_____	_____	_____	_____	_____
5. Does the child have a health card?					
a. <i>Zaza salama</i> (show)	[a]	[a]	[a]	[a]	[a]
b. Other (show)	[b]	[b]	[b]	[b]	[b]
c. No	[c]	[c]	[c]	[c]	[c]
6. Is the child Male or Female? (<i>Male=M, Female=F</i>)	_____	_____	_____	_____	_____
Child's date of birth	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
How old is the child (in months)	_____	_____	_____	_____	_____
<i>FIRST, I WOULD LIKE TO ASK YOU A QUESTION ABOUT VITAMIN A</i>					
7. Has (<i>child's name</i>) received Vitamin A within the last six months ?					
a. Yes, during mass distribution	[a]	[a]	[a]	[a]	[a]
b. Yes, during routine visits	[b]	[b]	[b]	[b]	[b]
c. If yes, date of last dose	/___/___/	/___/___/	/___/___/	/___/___/	/___/___/
d. No	[d]	[d]	[d]	[d]	[d]
<i>NEXT QUESTIONS ARE ABOUT BREASTFEEDING AND CHILD FEEDING</i>					
8. Do you still breastfeed (<i>child's name</i>)?					

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
a. Yes b. No (<i>go to question 11</i>)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
9. How many times did you breastfeed (<i>child's name</i>) yesterday (day and night) ? a. 8 times or more b. Less than 8 times c. Does not know	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]
10. Since you have been breastfeeding, what amount of food do you eat ? a. More than usual b. As usual c. Less than usual d. Does not know	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]
11. When did you start giving foods other than breast milk to (<i>child's name</i>)? a. Before 6 months b. 6 months c. After 6 months d. Does not know	[a]____ [b] [c]__m [d]	[a]__m [b] [c]__m [d]	[a]__m [b] [c]__m [d]	[a]____ [b] [c]__m [d]	[a]__m [b] [c]__m [d]
12. Yesterday, how many times did you give the family's food to (<i>child's name</i>)? a. Number of times b. Does not know	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]
13. Yesterday, what did (<i>child's name</i>) drink in addition to breast milk? (Enumerate and tick all answers) a. Water b. Sweetened water c. Rice water d. Fruit juice e. Tea f. Cow milk g. Milk powder/condensed milk	[a] [b] [c] [d] [e] [f] [g]	[a] [b] [c] [d] [e] [f] [g]	[a] [b] [c] [d] [e] [f] [g]	[a] [b] [c] [d] [e] [f] [g]	[a] [b] [c] [d] [e] [f] [g]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
h. Coffee	[h]	[h]	[h]	[h]	[h]
i. <i>Ranon'ampango</i> (burnt rice decoction)	[i]	[i]	[i]	[i]	[i]
j. Other fluids	[j]	[j]	[j]	[j]	[j]
k. None	[k]	[k]	[k]	[k]	[k]
14. Does (<i>child's name</i>) eat in a separate plate?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
15. How many kinds of curries and fruits did you give to (<i>child's name</i>) yesterday ?					
a. Number of curries	[a]_____	[a]_____	[a]_____	[a]_____	[a]_____
b. Number of fruits	[b]_____	[b]_____	[b]_____	[b]_____	[b]_____
c. Does not know	[c]	[c]	[c]	[c]	[c]
16. Yesterday , which of the following foods did you give to (<i>child's name</i>)? (Enumerate and tick all answers)					
a. Flour, rice, potato, bread or other meal	[a]	[a]	[a]	[a]	[a]
b. Roots/tubers (yam, cassava, sweet potato, taro...)	[b]	[b]	[b]	[b]	[b]
c. Pumpkin, carrots, mangoes, or yellow-orange fruits	[c]	[c]	[c]	[c]	[c]
d. Other fruits	[d]	[d]	[d]	[d]	[d]
e. Vegetables	[e]	[e]	[e]	[e]	[e]
f. Dark green leaves	[f]	[f]	[f]	[f]	[f]
g. Different meat (beef, pork)	[g]	[g]	[g]	[g]	[g]
h. Poultry (chicken, duck)	[h]	[h]	[h]	[h]	[h]
i. Offals	[i]	[i]	[i]	[i]	[i]
j. Fish (dried, fresh, sea), shrimp, crab	[j]	[j]	[j]	[j]	[j]
k. Eggs	[k]	[k]	[k]	[k]	[k]
m. Dried beans (beans, corn, bambara pea)	[l]	[l]	[l]	[l]	[l]
n. Soya	[m]	[m]	[m]	[m]	[m]
o. Yoghurt or cheese	[n]	[n]	[n]	[n]	[n]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
p Oil, butter, ground peanuts, coconut	[o]	[o]	[o]	[o]	[o]
r. Silk worm, grasshopper/locusts, other edible insects	[p]	[p]	[p]	[p]	[p]
s. Sugar, Honey, Salt	[q]	[q]	[q]	[q]	[q]
t. Other	[r]	[r]	[r]	[r]	[r]
17. How was the consistency of the food you gave to <i>(child's name)</i> yesterday ? (Tick all answers)					
a. Dry/Hard	[a]	[a]	[a]	[a]	[a]
b. Thick/Soft	[b]	[b]	[b]	[b]	[b]
c. Semi-liquid	[c]	[c]	[c]	[c]	[c]
d. Liquid	[d]	[d]	[d]	[d]	[d]
f . Does not know	[e]	[e]	[e]	[e]	[e]
18. Did <i>(child's name)</i> eat enriched flour yesterday ?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
NOW, I WOULD LIKE TO GET INFORMATION ABOUT <i>(child's name)</i>'s HEALTH					
19. Within the last two weeks , has <i>(child's name)</i> been ill?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>go to question 28</i>)	[b]	[b]	[b]	[b]	[b]
20. If yes, what was the illness? (Tick all answers)					
a. Diarrhea	[a]	[a]	[a]	[a]	[a]
b. Fever	[b]	[b]	[b]	[b]	[b]
c. Cough/difficult breathing	[c]	[c]	[c]	[c]	[c]
d. Other illness	[d]	[d]	[d]	[d]	[d]
21. During illness, how often did you breastfeed <i>(child's name)</i> in one day (day and night)?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not breastfeed	[d]	[d]	[d]	[d]	[d]
e. Does not breastfeed anymore	[e]	[e]	[e]	[e]	[e]
f. Does not know	[f]	[f]	[f]	[f]	[f]
22. During illness , how was the amount of food (<i>child's name</i>) ate in one day?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not eat	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
23. During illness how was the amount of water that (<i>child's name</i>) drank?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not drink any water	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
24. Is (<i>child's name</i>) still ill?					
a. Yes (Go to question 28)	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
25. If NO, how many times did you breastfeed (<i>child's name</i>) per day (day and night) after recovery ?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Does not breastfeed anymore	[d]	[d]	[d]	[d]	[d]
e. Did not breastfeed	[e]	[e]	[e]	[e]	[e]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
f. Does not know	[f]	[f]	[f]	[f]	[f]
26. After recovery, how many times per day did you give the family's food to (<i>child's name</i>) and for how long did you do so?					
a. More than usual	[a] _____ days	[a] _____ days	[a] _____ days	[a] _____ days	[a] _____ days
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not eat	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
27. After recovery, how was the amount of water which (<i>child's name</i>) drank?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not drink any water	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
LET'S TALK ABOUT FAMILY PLANNING NOW					
28. Did you use Lactation and Amenorrhea Method (LAM) for family planning?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
29. Do you think that LAM is an efficient method of family planning?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
<p>30. What conditions must the woman meet in order for LAM to be efficient? (Tick all answers)</p> <p>a. Menses are not yet back</p> <p>b. Mother practices exclusive breastfeeding</p> <p>c. The child is under six months</p> <p>d. Other</p> <p>e. Does not know</p>	[a]	[a]	[a]	[a]	[a]
<p>31. Which family planning method(s) are you currently using?</p> <p>a. LAM (If mother has a child under 6 months)</p> <p>b. Pills</p> <p>c. Condoms</p> <p>d. Spermicides</p> <p>e. Injection</p> <p>f. Norplant</p> <p>g. IUD</p> <p>h. Surgery (Tubla ligation/Vasectomy)</p> <p>i. Other</p> <p>j. Non-user</p>	[a]	[a]	[a]	[a]	[a]
<p>32. Have you ever heard or seen an messages on LAM? (Tick all answers)</p> <p>a. Television</p> <p>b. Radio</p> <p>c. Taxi brousse</p> <p>d. Taxi be</p> <p>e. Other</p> <p>f. No</p>	[a]	[a]	[a]	[a]	[a]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
NOW, I WOULD LIKE TO EXPLORE YOUR KNOWLEDGE OF CHILD FEEDING FROM 6 to 11 MONTHS					
33. According to you, around which month should the child be given complementary foods in addition to breast milk ? a. Before 6 months b. At 6 months c. After 6 months	[a] [b] [c]	[a] m [b] m [c] m	[a] [b] [c]	[a] m [b] m [c] m	[a] [b] [c]
34. According to you, how often per day should children aged 6 to 11 months breastfeed? a. Less than 8 times b. Eight times or more c. Other c. Does not know	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]
35. According to you, until which age should children breastfeed ? a. Less than 2 years b. 2 years or more c. Does not know	[a]___m [b] [c]	[a]___m [b] [c]	[a]___m [b] [c]	[a]___m [b] [c]	[a]___m [b] [c]
36. From whom/what did you hear the previous messages? (Tick all answers) a. Health worker 1. Mass sensitisation during prenatal consultations 2. Individual counseling during prenatal consultation 3. At delivery/Post-partum care 4. Mass sensitisation during post-partum visits 5. Individual negotiation with the mother during post-partum visits 6. Family planning 7. Immunization 8. Child growth monitoring and promotion 9. Sick child visits 10. Home visits 11. Other (specify) b. Health animator c. Family member, friend c. Poopy – song d. Poopy – on the radio e. Poopy – on television f. <i>Gazety</i> g. Health card	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [c] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [c] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [c] [d] [e] [f] [g] [h]	[a] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] _____ [b] [c] [d] [e] [f] [g] [h]	

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
h. Other	[j]	[j]	[j]	[j]	[j]
37. According to you, what quantity of food can children aged 6-11 months finish at every meal?					
<div style="display: flex; align-items: center;"> <div style="font-size: 4em; margin-right: 10px;">{</div> <div> <p>6-9 months</p> <p style="margin-left: 40px;">a. main food</p> <p style="margin-left: 40px;">b. curry</p> <p>9-11 months</p> <p style="margin-left: 40px;">a-main food</p> <p style="margin-left: 40px;">b. curry</p> <p>or 6-11 months</p> <p style="margin-left: 40px;">a-main food</p> <p style="margin-left: 40px;">b. curry</p> </div> </div>	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonfuls
	____ spoonful s	____ spoonfuls	____ spoonfuls	____ spoonfuls	____ spoonfuls
	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonfuls
	____ spoonfuls	____ spoonfuls	____ spoonfuls	____ spoonfuls	____ spoonfuls
	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonful s	____ kapoaka ____ spoonfuls	____ kapoaka ____ spoonfuls
	____ spoonfuls	____ spoonfuls	____ spoonfuls	____ spoonfuls	____ spoonfuls
38. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitisation during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
39. According to you how many times per day should children aged 6-11 months receive complementary foods in addition to breast milk? a. 3 times b. More than 3 times c. Less than 3 times d. Does not know	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]
40. According to you, how many kinds of curries, and fruits should be used to enrich the child's food for one day? a. Number of curries b. Number of fruits c. Does not know	[a]_____ [b]_____ [c]	[a]_____ [b]_____ [c]	[a]_____ [b]_____ [c]	[a]_____ [b]_____ [c]	[a]_____ [b]_____ [c]
41. According to you, which foods can be used to enrich the child's food at every meal? (Tick all answers) a. Oil (number of spoonfuls) b. Shrimp c. Peanuts, Butter, Coconut d. Soja e. Meat f. Fish g. Chicken h. Egg i. Dried beans j. Vegetables k. Dark green leaves l. Fruit m. Other	[a]_____ [b] [c] [d] [e] [f] [g] [h] [i] [j] [k] [l] [m]	[a]_____ [b] [c] [d] [e] [f] [g] [h] [i] [j] [k] [l] [m]	a]_____ [b] [c] [d] [e] [f] [g] [h] [i] [j] [k] [l] [m]	[a]_____ [b] [c] [d] [e] [f] [g] [h] [i] [j] [k] [l] [m]	[a]_____ [b] [c] [d] [e] [f] [g] [h] [i] [j] [k] [l] [m]
42. According to you, what types of foods , in addition to breastmilk can be used to vary the child's diet for one day ? (Tick all answers) a. Main foods (rice, roots/ tubers)	[a]	[a]	[a]	[a]	[a]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
b. Meat, fish, egg, chicken	[b]	[b]	[b]	[b]	[b]
c. Oil, peanuts	[c]	[c]	[c]	[c]	[c]
d. Dried beans	[d]	[d]	[d]	[d]	[d]
e. Vegetables, Dark green leaves	[e]	[e]	[e]	[e]	[e]
f. Dairy products	[f]	[f]	[f]	[f]	[f]
g. Fruits	[g]	[g]	[g]	[g]	[g]
h. Sugar, Honey, Salt	[h]	[h]	[h]	[h]	[h]
i. Other	[i]	[i]	[i]	[i]	[i]
43. From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitisation during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Poopy – song	[d]	[d]	[d]	[d]	[d]
e. Poopy – on the radio	[e]	[e]	[e]	[e]	[e]
f. Poopy – on television	[f]	[f]	[f]	[f]	[f]
g. Gazety	[g]	[g]	[g]	[g]	[g]
h. Health card	[h]	[h]	[h]	[h]	[h]
i. Other	[i]	[i]	[i]	[i]	[i]
44. According to you, how can you encourage a child to finish his/her food portion? (Tick all answers)					
a. Serving the child's food in a separate plate	[a]	[a]	[a]	[a]	[a]
b. Sitting beside the child to feed him/her	[b]	[b]	[b]	[b]	[b]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
c. Offering foods which the child can hold	[c]	[c]	[c]	[c]	[c]
d. Feeding the child on demand	[d]	[d]	[d]	[d]	[d]
e. Eating is like a game	[e]	[e]	[e]	[e]	[e]
f. Coaxing the child	[f]	[f]	[f]	[f]	[f]
g. Being patient when feeding the child	[g]	[g]	[g]	[g]	[g]
h. Other	[h]	[h]	[h]	[h]	[h]
i. Does not know	[i]	[i]	[i]	[i]	[i]
45. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitisation during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. health card	[e]	[e]	[e]	[e]	[e]
e. Other	[f]	[f]	[f]	[f]	[f]
46. According to you, after recovery , how many meals should the child be given in one day? how long should this be done?					

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
a. More than usual	[a] _____ andro	[a] _____ andro	[a] _____ andro	[a] _____ andro	[a] _____ andro
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. The child should not eat anything	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
47. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
48. According to you, what should be the consistency of the food given to children aged 6-11 months ? (Tick all answers)					
a. Dry/Hard	[a]	[a]	[a]	[a]	[a]
b. Thick/Soft	[b]	[b]	[b]	[b]	[b]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
c. Semi-liquid	[c]	[c]	[c]	[c]	[c]
d. Liquid	[d]	[d]	[d]	[d]	[d]
f . Does not know	[e]	[e]	[e]	[e]	[e]
49. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visit	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
50. According to you, how often (in months) should children aged 6 months on should receive vitamin A supplements?					
a. Every 6 months	[a]	[a]	[a]	[a]	[a]
b. More than 6 months	[b]	[b]	[b]	[b]	[b]
c. Less than 6 months	[c]	[c]	[c]	[c]	[c]

Idnum	Mother #	Mother #	Mother #	Mother #	Mother #
d. Does not know	[d]	[d]	[d]	[d]	[d]
51. From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitisation during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Radio	[f]	[f]	[f]	[f]	[f]
g. Other	[g]	[g]	[g]	[g]	[g]
LET'S TALK ABOUT HYGIENE NOW					
52. Yesterday , did you wash your hands every time you prepared food?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>Go to question 54</i>)	[b]	[b]	[b]	[b]	[b]
53. If yes, did you use soap to wash your hands?					

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
54. Yesterday , did you wash your hands before every meal?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>Go to question 56</i>)	[b]	[b]	[b]	[b]	[b]
55. If yes, did you use soap every time you washed your hands?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
56. Yesterday , did you wash (<i>child's name</i>)'s hands before every meal?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>Go to question 58</i>)	[b]	[b]	[b]	[b]	[b]
57. If yes, did you use soap?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
58. According to you, what kind of salt should the family use to be in good health?					
a. Iodized salt	[a]	[a]	[a]	[a]	[a]
b. Other	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
59. Do you use iodized salt ?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. Does not know	[b]	[b]	[b]	[b]	[b]
c. No	[c]	[c]	[c]	[c]	[c]

Idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
60. From whom/what did you hear about the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitisation during prenatal visits	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal visits	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitisation during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]

Child weighting and measuring					
Weight (grams)	_____g	_____g	_____g	_____g	_____g
Size when lying (cm)	_____cm	_____cm	_____cm	_____cm	_____cm
(Interview about children 6<11.9 months is completed) Ending time	____:____	____:____	____:____	____:____	____:____

Annex 3C:

QUESTIONNAIRE FOR MOTHERS OF CHILDREN AGED **12-23.9 months** NON-MEMBERS OF WOMEN'S GROUPS

SUPERVISOR _____ INTERVIEWER _____

PROVINCE _____ SSD _____ MUNICIPALITY _____

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
Date of interview	___/___/05	___/___/05	___/___/05	___/___/05	___/___/05
1. Starting time	___:___	___:___	___:___	___:___	___:___
2. <i>Fokontany</i> of residence	_____	_____	_____	_____	_____
3. Number of people in the household (sharing the same food)	_____	_____	_____	_____	_____
a. Children under 5 years	_____	_____	_____	_____	_____
b. People aged from 5 years on	_____	_____	_____	_____	_____
4. Common name of child	_____	_____	_____	_____	_____
5. Does the child have a health card?					
a. <i>Zaza salama</i> (show)	[a]	[a]	[a]	[a]	[a]
b. Other (show)	[b]	[b]	[b]	[b]	[b]
c. No	[c]	[c]	[c]	[c]	[c]
6. Is the child Male or Female? (<i>Male=M</i> , <i>Female=F</i>)	_____	_____	_____	_____	_____
Child's date of birth	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
How many months old is the child	_____	_____	_____	_____	_____
<i>FIRST, I WOULD LIKE TO ASK YOU QUESTIONS ABOUT VITAMIN A</i>					
7. Has (<i>child's name</i>) received Vitamin A within the last six months ?					
a. Yes, during mass distribution	[a]	[a]	[a]	[a]	[a]
b. Yes, during routine visits	[b]	[b]	[b]	[b]	[b]
c. If yes, date of last dose	/___/___/___	/___/___/___	/___/___/___	/___/___/___	/___/___/___
d. No	[d]	[d]	[d]	[d]	[d]
8. Has (<i>child's name</i>) been dewormed within the last six months ?					
a. Yes, during mass distribution	[a]	[a]	[a]	[a]	[a]
b. Yes, during routine visits	[b]	[b]	[b]	[b]	[b]
c. If yes, date of last dose	/___/___/___	/___/___/___	/___/___/___	/___/___/___	/___/___/___

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
d. No	[d]	[d]	[d]	[d]	[d]
THE NEXT QUESTIONS PERTAIN TO CHILD IMMUNIZATION					
9 BCG a. Yes b. If yes, date of immunization c. No Is there a scar on the child's left arm? a. Yes b. No	[a] /__/_/____ [c] [a] [b]	[a] /__/_/____ [c] [a] [b]	[a] /__/_/____ [c] [a] [b]	[a] /__/_/____ [c] [a] [b]	[a] /__/_/____ [c] [a] [b]
10. DTCHeP1 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
11. POLIO1 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
12. DTCHeP2 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
13. POLIO2 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
14. DTCHeP3 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
15. POLIO3 a. Yes b. If yes, date of immunization c. No	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]	[a] /__/_/____ [c]
16. Measles a. Yes	[a]	[a]	[a]	[a]	[a]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
b. If yes, date of last immunization c. No	/__/__/__ [c]	/__/__/__ [c]	/__/__/__ [c]	/__/__/__ [c]	/__/__/__ [c]
17. Does (<i>child's name</i>) have an immunization diploma? a. Yes b.No (<i>go to question 19</i>) c. Did not receive (<i>go to question 19</i>)	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]
18. Can you produce this diploma? a. Yes b. No	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
NEXT QUESTIONS ARE ABOUT BREASTFEEDING AND CHILD FEEDING					
19. Do you still breastfeed (<i>child's name</i>)? a. Yes b. No (<i>go to question 22</i>)	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
20. How many times did you breastfeed (<i>child's name</i>) yesterday (day- and night)? a. 8 times or more b. Less than 8 times c. Does not know	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]
21. Since you are breastfeeding, what amount of food do you eat ? a. More than usual b. As usual c. Less than usual d. Does not know	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]	[a] [b] [c] [d]
22. When did you start giving foods other than breast milk to (<i>child's name</i>)? a. Before 6 months	[a]____m	[a]____m	[a]____m	[a]____m	[a]____m

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
b. 6 months c. After 6 months d. Does not know	[b] [c]____m [d]	[b] [c]____m [d]	[b] [c]____m [d]	[b] [c]____m [d]	[b] [c]____m [d]
23. Yesterday, how many times did you give the family's food to (<i>child's name</i>)? c. Number of times d. Does not know	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]
24. Yesterday, how many times did you give snacks to (<i>child's name</i>)? a. Number of times b. Does not know	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]	[a]____ [b]
25. Yesterday, what did (<i>child's name</i>) drink in addition to breast milk? (Enumerate and tick all answers) a. Water b. Sweetened water c. Rice water d. Fruit juice e. Tea f. Cow milk g. Milk powder/condensed milk h. Coffee i. <i>Ranon'ampango</i> (burnt rice decoction) j. Other fluids k. None	[a] [b] [c] [d] [e] [f] [g] [h] [i] [j] [k]	[a] [b] [c] [d] [e] [f] [g] [h] [i] [j] [k]	[a] [b] [c] [d] [e] [f] [g] [h] [i] [j] [k]	[a] [b] [c] [d] [e] [f] [g] [h] [i] [j] [k]	[a] [b] [c] [d] [e] [f] [g] [h] [i] [j] [k]
26. Does (<i>child's name</i>) eat in a separate plate? a. Yes	[a]	[a]	[a]	[a]	[a]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
b. No	[b]	[b]	[b]	[b]	[b]
27. Yesterday , how many kinds of curries, and fruits did you give to (<i>child's name</i>)?					
a. Number of curries	[a]_____	[a]_____	[a]_____	[a]_____	[a]_____
b. Number of fruits	[b]_____	[b]_____	[b]_____	[b]_____	[b]_____
c. Does not know	[c]	[c]	[c]	[c]	[c]
28. Yesterday , which of the following foods did you give to (<i>child's name</i>)? (Enumerate and tick all answers)					
a. Flour, rice, potato, bread or other meal	[a]	[a]	[a]	[a]	[a]
b. Roots/tubers (oviala, cassava, sweet potato, taro...)	[b]	[b]	[b]	[b]	[b]
c. Pumpkin, carrots, mangoes, or yellow-orange fruits	[c]	[c]	[c]	[c]	[c]
d. Other fruits	[d]	[d]	[d]	[d]	[d]
e. Vegetables	[e]	[e]	[e]	[e]	[e]
f. Dark green leaves	[f]	[f]	[f]	[f]	[f]
g. Different meat (beef, pork)	[g]	[g]	[g]	[g]	[g]
h. Poultry (chicken, duck)	[h]	[h]	[h]	[h]	[h]
i. offals	[i]	[i]	[i]	[i]	[i]
j. Fish (dried, fresh, sea), shrimp, crabs	[j]	[j]	[j]	[j]	[j]
k. Eggs	[k]	[k]	[k]	[k]	[k]
l. Dried beans (beans, corn, bambara pea)	[l]	[l]	[l]	[l]	[l]
n. Soya	[m]	[m]	[m]	[m]	[m]
o. Yoghurt or cheese	[o]	[o]	[o]	[o]	[o]
p Oil, butter, ground peanuts, coconut	[p]	[p]	[p]	[p]	[p]
r. Silk worms, grasshopper/locusts, other edible insects	[r]	[r]	[r]	[r]	[r]
s. Sugar, Honey, Salt	[s]	[s]	[s]	[s]	[s]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
t. Other	[t]	[t]	[t]	[t]	[t]
29. How was the consistency of the food you gave to <i>(child's name)</i> yesterday? (Tick all answers)					
a. Dry/Hard	[a]	[a]	[a]	[a]	[a]
b. Thick/Soft	[b]	[b]	[b]	[b]	[b]
c. Semi-liquid	[c]	[c]	[c]	[c]	[c]
d. Liquid	[d]	[d]	[d]	[d]	[d]
f. Does not know	[e]	[e]	[e]	[e]	[e]
30. Did <i>(child's name)</i> eat enriched flour yesterday?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
NOW, I WOULD LIKE TO GET INFORMATION ABOUT <i>(child's name)</i>'s HEALTH					
19. Within the last two weeks , has <i>(child's name)</i> been ill?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (<i>go to question 40</i>)	[b]	[b]	[b]	[b]	[b]
20. If yes, what was the illness? (Tick all answers)					
a. Diarrhea	[a]	[a]	[a]	[a]	[a]
b. Fever	[b]	[b]	[b]	[b]	[b]
c. Cough/difficult breathing	[c]	[c]	[c]	[c]	[c]
d. Other illness	[d]	[d]	[d]	[d]	[d]
33. During the illness, how often did you breastfeed <i>(child's name)</i> in one day (day and night)?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not breastfeed	[d]	[d]	[d]	[d]	[d]
e. Does not breastfeed anymore	[e]	[e]	[e]	[e]	[e]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
f. Does not know	[f]	[f]	[f]	[f]	[f]
21. During illness , how was the amount of food (<i>child's name</i>) ate in one day?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not eat	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
22. During illness how was the amount of water that (<i>child's name</i>) drank?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not drink any water	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
36. Is (<i>child's name</i>) still ill?					
a. Yes (<i>Go to question 40</i>)	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
37. If NO, how many times did you breastfeed (<i>child's name</i>) in one day (day and night) after recovery?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Does not breastfeed anymore	[d]	[d]	[d]	[d]	[d]
e. Did not breastfeed	[e]	[e]	[e]	[e]	[e]
g Does not know	[f]	[f]	[f]	[f]	[f]
38. After recovery, how many times per day did you give the family's food to (<i>child's name</i>) and for how long did you do so?					
a. More than usual	[a] _____day	[a] _____day	[a] _____day	[a] _____day	[a] _____day
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not eat	[d]	[d]	[d]	[d]	[d]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
e. Does not know	[e]	[e]	[e]	[e]	[e]
39. After recovery, how was the amount of water which (child's name) drank?					
a. More than usual	[a]	[a]	[a]	[a]	[a]
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. Did not drink any water	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]
LET'S TALK ABOUT FAMILY PLANNING NOW					
40. Did you use Lactation and Amenorrhea Method (LAM) for family planning?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
41. Do you think that LAM is an efficient method of family planning?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
42. What conditions must the woman meet in order for LAM to be efficient? (Tick all answers)					
a. Menses are not yet back	[a]	[a]	[a]	[a]	[a]
b. Mother practices exclusive breastfeeding	[b]	[b]	[b]	[b]	[b]
c. The child is under six months	[c]	[c]	[c]	[c]	[c]
d. Other	[d]	[d]	[d]	[d]	[d]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
e. Does not know	[e]	[e]	[e]	[e]	[e]
43. Which family planning method(s) are you currently using?					
a. LAM (If mother has a child under 6 months)	[a]	[a]	[a]	[a]	[a]
b. Pills	[b]	[b]	[b]	[b]	[b]
c. Condoms	[c]	[c]	[c]	[c]	[c]
d. Spermicides	[d]	[d]	[d]	[d]	[d]
e. Injection	[e]	[e]	[e]	[e]	[e]
f. Norplant	[f]	[f]	[f]	[f]	[f]
g. IUD	[g]	[g]	[g]	[g]	[g]
h. Surgery (Tubal ligation /Vasectomy)	[h]	[h]	[h]	[h]	[h]
i. Other	[i]	[i]	[i]	[i]	[i]
j. Non-user	[j]	[j]	[j]	[j]	[j]
44. Have you ever heard or seen an advertisement/spots on LAM? (Tick all answers)					
a. Television	[a]	[a]	[a]	[a]	[a]
b. Radio	[b]	[b]	[b]	[b]	[b]
c. Taxi brousse	[c]	[c]	[c]	[c]	[c]
d. Taxi be	[d]	[d]	[d]	[d]	[d]
e. Other	[e]	[e]	[e]	[e]	[e]
f. No	[f]	[f]	[f]	[f]	[f]
NOW, I WOULD LIKE TO EXPLORE YOUR KNOWLEDGE OF CHILD FEEDING FROM 12 MONTHS ON					
45. According to you, around which month should children be given complementary foods in addition to breast milk ?					
a. Before 6 months	[a]____m	[a]____m	[a]____m	[a]____m	[a]____m
b. 6 months	[b]	[b]	[b]	[b]	[b]
c. After 6 months	[c]	[c]	[c]	[c]	[c]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
d. Does not know	[d]	[d]	[d]	[d]	[d]
46. According to you, until which age should children breastfeed?					
a. Less than 2 years	[a]____m	[a]____ m	[a]____ m	[a]____ m	[a]____ m
b. 2 years or later	[b]	[b]	[b]	[b]	[b]
c. Does not know	[c]	[c]	[c]	[c]	[c]
47. According to you, what amount of food can children aged 1 year and on eat at every meal?					
a. Main food	____kapoaka ____spoonfuls	____kapoaka ____spoonfuls	____kapoaka ____spoonfuls	____kapoaka ____spoonfuls	____kapoaka ____spoonfuls
b. Curry	____spoonfuls	____spoonfuls	____spoonfuls	____spoonfuls	____spoonfuls
48 . From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Ill child consultation	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Poopy – song	[d]	[d]	[d]	[d]	[d]
e. Poopy – on the radio	[e]	[e]	[e]	[e]	[e]
f. Poopy – on television	[f]	[f]	[f]	[f]	[f]
g. <i>Gazety</i>	[g]	[g]	[g]	[g]	[g]
h. Health card	[h]	[h]	[h]	[h]	[h]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
i. Other	[i]	[i]	[i]	[i]	[i]
49. According to you, how many times should a child eat in one day?					
a. Number of times	[a]_____	[a]_____	[a]_____	[a]_____	[a]_____
b. Does not know	[b]	[b]	[b]	[b]	[b]
50. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
51. According to you, how many kinds of curries, and fruits should be used to enrich the child's food for one day?					
a. Number of curries	[a]_____	[a]_____	[a]_____	[a]_____	[a]_____
b. Number of fruits	[b]_____	[b]_____	[b]_____	[b]_____	[b]_____

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
c. Does not know	[c]	[c]	[c]	[c]	[c]
<p>52. According to you which foods can be used to enrich the child's food at every meal? (Tick all answers)</p> <p>a. Oil (number of spoonfuls) [a]_____</p> <p>b. Shrimp [b]</p> <p>c. Peanuts, Butter, Coconut [c]</p> <p>d. Soja [d]</p> <p>e. Meat [e]</p> <p>f. Fish [f]</p> <p>g. Chicken [g]</p> <p>h. Egg [h]</p> <p>I. Dried beans [i]</p> <p>j. Vegetables [j]</p> <p>k. Dark green leaves [k]</p> <p>l. Fruit [l]</p> <p>n. Other [m]</p>					
<p>53. According to you, what foods, in addition to breastmilk can be used to vary the child's diet in one day? (Tick all answers)</p> <p>a. Main foods (rice, roots/ tubers) [a]</p> <p>b. Meat, fish, egg, chicken [b]</p> <p>c. Oil, peanuts [c]</p> <p>d. Dried beans [d]</p> <p>e. Vegetables, Dark green leaves [e]</p> <p>f. Dairy products [f]</p> <p>g. Fruits [g]</p> <p>h. Sugar, Honey, Salt [h]</p> <p>i. Other [i]</p>					

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
54 . From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Poopy – song	[d]	[d]	[d]	[d]	[d]
e. Poopy – radio	[e]	[e]	[e]	[e]	[e]
f. Poopy – television	[f]	[f]	[f]	[f]	[f]
g. Gazety	[g]	[g]	[g]	[g]	[g]
h. Health card	[h]	[h]	[h]	[h]	[h]
i. Other	[i]	[i]	[i]	[i]	[i]
55. According to you, how can you encourage a child to finish his/her food portion? (Tick all answers)					
a. Serve the child's food in a separate plate	[a]	[a]	[a]	[a]	[a]
b. Sit beside the child to feed him/her	[b]	[b]	[b]	[b]	[b]
c. Offer foods which the child can hold	[c]	[c]	[c]	[c]	[c]
d. Feed the child on demand	[d]	[d]	[d]	[d]	[d]
e. Eating is like a game	[e]	[e]	[e]	[e]	[e]
f. Coaxing the child	[f]	[f]	[f]	[f]	[f]
g. Being patient when feeding the child	[g]	[g]	[g]	[g]	[g]
h. Other	[h]	[h]	[h]	[h]	[h]
i. Does not know	[i]	[i]	[i]	[i]	[i]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
56. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. <i>Gazety</i>	[d]	[d]	[d]	[d]	[d]
e. Other	[e]	[e]	[e]	[e]	[e]
57. According to you, after recovery, how many meals should the child be given in one day? how long should this be done?					
a. More than usual	[a] _____ days	[a] _____ days	[a] _____ days	[a] _____ days	[a] _____ days
b. As usual	[b]	[b]	[b]	[b]	[b]
c. Less than usual	[c]	[c]	[c]	[c]	[c]
d. The child should not eat anything	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
58. From whom/what did you hear the previous message? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
59. According to you, what should be the consistency of the food given to children aged 1 year and on? (Tick all answers)					
a. Dry/Hard	[a]	[a]	[a]	[a]	[a]
b. Thick/Soft	[b]	[b]	[b]	[b]	[b]
c. Semi-liquid	[c]	[c]	[c]	[c]	[c]
d. Liquid	[d]	[d]	[d]	[d]	[d]
e. Does not know	[e]	[e]	[e]	[e]	[e]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
<p>60. From whom/what did you hear the previous message? (Tick all answers)</p> <p>a. Health worker</p> <p>1. Mass sensitization during prenatal consultations</p> <p>2. Individual counseling during prenatal consultations</p> <p>3. At delivery/Post-partum care</p> <p>4. Mass sensitization during post-partum visits</p> <p>5. Individual negotiation with the mother during post-partum visits</p> <p>6. Family planning</p> <p>7. Immunization</p> <p>8. Child growth monitoring and promotion</p> <p>9. Sick child visits</p> <p>10. Home visits</p> <p>11. Other (specify)</p> <p>b. Health animator</p> <p>c. Family member, friend</p> <p>d. <i>Gazety</i></p> <p>e. Health card</p> <p>f. Other</p>	[a]	[a]	[a]	[a]	[a]
	[1]	[1]	[1]	[1]	[1]
	[2]	[2]	[2]	[2]	[2]
	[3]	[3]	[3]	[3]	[3]
	[4]	[4]	[4]	[4]	[4]
	[5]	[5]	[5]	[5]	[5]
	[6]	[6]	[6]	[6]	[6]
	[7]	[7]	[7]	[7]	[7]
	[8]	[8]	[8]	[8]	[8]
	[9]	[9]	[9]	[9]	[9]
	[10]	[10]	[10]	[10]	[10]
	[b]	[b]	[b]	[b]	[b]
	[c]	[c]	[c]	[c]	[c]
	[d]	[d]	[d]	[d]	[d]
	[e]	[e]	[e]	[e]	[e]
	[f]	[f]	[f]	[f]	[f]
<p>61. According to you, how often (in months) should children aged 6 months on receive vitamin A supplements?</p> <p>a. Every 6 months</p> <p>b. More than 6 months</p> <p>c. Less than 6 months</p> <p>d. Does not know</p>	[a]	[a]	[a]	[a]	[a]
	[b]	[b]	[b]	[b]	[b]
	[c]	[c]	[c]	[c]	[c]
	[d]	[d]	[d]	[d]	[d]
<p>62. According to you, how often (in months) should children aged one year and on be dewormed ?</p> <p>a. Every 6 months</p> <p>b. More than 6 months</p> <p>c. Less than 6 months</p> <p>d. Does not know</p>	[a]	[a]	[a]	[a]	[a]
	[b]	[b]	[b]	[b]	[b]
	[c]	[c]	[c]	[c]	[c]
	[d]	[d]	[d]	[d]	[d]

idnum	Mother #	Mother #	Mother #	Mother #	Mother #
63. From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)					
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Radio	[f]	[f]	[f]	[f]	[f]
g. Other	[g]	[g]	[g]	[g]	[g]
LET'S TALK ABOUT HYGIENE NOW					
64. Yesterday , did you wash your hands every time you prepared food?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No (Go to question 66)	[b]	[b]	[b]	[b]	[b]
65.If yes, did you use soap to wash your hands?					
a. Yes	[a]	[a]	[a]	[a]	[a]
b. No	[b]	[b]	[b]	[b]	[b]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
<p>66. Yesterday, did you wash your hands before every meal?</p> <p>a. Yes</p> <p>b. No (<i>Go to question 68</i>)</p>	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
<p>67. If yes, did you use soap every time you washed your hands?</p> <p>a. Yes</p> <p>b. No</p>	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
<p>68. Yesterday, did you wash (<i>child's name</i>)'s hands before every meal?</p> <p>a. Yes</p> <p>b. No (<i>Go to question 70</i>)</p>	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
<p>69. If yes, did you use soap?</p> <p>a. Yes</p> <p>b. No</p>	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]
NOW, I WOULD LIKE TO ASK YOU A FEW QUESTIONS ABOUT SALT					
<p>70. According to you what kind of salt should the family use to be in good health?</p> <p>a. Iodized salt</p> <p>b. Other</p> <p>c. Does not know</p>	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]
<p>71. Do you use iodized salt?</p> <p>a. Yes</p> <p>b. Does not know</p> <p>c. No</p>	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]	[a] [b] [c]

idnum	Mother # _____	Mother # _____	Mother # _____	Mother # _____	Mother # _____
72. From whom/what did you hear the previous messages? (Tick all answers)					
a. Health worker	[a]	[a]	[a]	[a]	[a]
1. Mass sensitization during prenatal consultations	[1]	[1]	[1]	[1]	[1]
2. Individual counseling during prenatal consultations	[2]	[2]	[2]	[2]	[2]
3. At delivery/Post-partum care	[3]	[3]	[3]	[3]	[3]
4. Mass sensitization during post-partum visits	[4]	[4]	[4]	[4]	[4]
5. Individual negotiation with the mother during post-partum visits	[5]	[5]	[5]	[5]	[5]
6. Family planning	[6]	[6]	[6]	[6]	[6]
7. Immunization	[7]	[7]	[7]	[7]	[7]
8. Child growth monitoring and promotion	[8]	[8]	[8]	[8]	[8]
9. Sick child visits	[9]	[9]	[9]	[9]	[9]
10. Home visits	[10]	[10]	[10]	[10]	[10]
11. Other (specify)	_____	_____	_____	_____	_____
b. Health animator	[b]	[b]	[b]	[b]	[b]
c. Family member, friend	[c]	[c]	[c]	[c]	[c]
d. Gazety	[d]	[d]	[d]	[d]	[d]
e. Health card	[e]	[e]	[e]	[e]	[e]
f. Other	[f]	[f]	[f]	[f]	[f]
Child weighting and measuring					
Weight (grams)	_____g	_____g	_____g	_____g	_____g
Size when lying (cm)	_____cm	_____cm	_____cm	_____cm	_____cm
(Interview about children 12-23,9 months is completed) Ending time	____:____	____:____	____:____	____:____	____:____

Annex 4

List of survey supervisors

Nom et prénoms	Organisme de travail	Zone de supervision	Enquête
Mme Lalaso Ramiadanarivelo	Direction Régionale de Santé d'Analamanga	Superviseur régional à Fianarantsoa	RAP
Mme Marie Jeanne Razafindraketaka	Direction Régionale de Santé de la Haute Matsiatra	Superviseur régional à Antananarivo et Antsirabe I	BASICS, ENDLINE
Mme Rachel Ranorovohangy	Direction Générale du Plan	Superviseur de district à Antsirabe I	RAP
Mr Victor Rabeza	Institut National de la Statistique	Superviseur régional à Antsirabe	BASICS
Mr Mamitiana Rakoto	Bureau des Normes	Superviseur de district à Andranomiditra	BASICS
Mr Gervais Alain Ramorasata	Institut National de Formation De Paramédicaux	Superviseur de district à Ambohimahasoa	ENDLINE
Mme Claudine Soavimanjary	Institut de Formation des Paramédicaux d'Antananarivo	Superviseur de district à Isorana, et à Fianarantsoa I	BASICS, ENDLINE
Mr Rado Andrianatoanina	Service de Nutrition	Superviseur de district à Ambohibary	BASICS
Mr Tiana Andrianoelina	SSD Antananarivo Nord	Superviseur de district à Ambano	BASICS
Mme Bakoly Rakotonomenjanahary	SSD Antananarivo Sud	Superviseur de district à Alakamisy Ambohimaha, et Fianarantsoa I	BASICS, ENDLINE
Mme Zay Mbolatiana Ratompoharisoa	Direction Régionale de Santé de Vakinankaratra	Superviseur de district à Fianarantsoa I	RAP
Mr Jean Bosco Rakotonirina	SSD Antsirabe II	Superviseur de district à Ambohimahasoa	RAP
Mme Lucie Aline Raharimanana	SSD Ambositra	Superviseur de district à Antananarivo Sud	RAP
Mme Yolande Nary Razafindrajao	SSD Ambohimahasoa	Superviseur de district à Antananarivo Nord	RAP
Mme Phillipine Andriamanantsoa	SSD Fianarantsoa I	Superviseur de district à Ambohimiarivo	BASICS
Mme Odile Claire Razafindranaly	SSD Fianarantsoa II	Superviseur de district à Antsirabe II	RAP
Mme Norotiana Rakotomalala	Consultant	Superviseur de district à Fianarantsoa II, et Antananarivo SUD	RAP, ENDLINE
Mme Sehenolalao Andrianasolo	Consultant	Superviseur de district à Manandona, et Antsirabe I	BASICS, ENDLINE
Mme Yvonne Ranorolalao	Consultant	Superviseur de district à Antsirabe I	ENDLINE
Mme Vololoniana Rasoanandrasana	Consultant	Superviseur de district à Ambositra	RAP, ENDLINE
Mme Soarivelo Razanamalala	Consultant	Superviseur de district à Antananarivo Nord	ENDLINE
Mr Davida Rasolofondranohatra	Consultant	Superviseur de district à Arivonimamo, Antananarivo Sud	CONTROLE, ENDLINE
Mr Wilson Rakotoarimanitra	Consultant	Superviseur de district à Alakamisy Itenina	BASICS
Mr Jean Andriamantsoa	Consultant	Superviseur de district à Antananarivo Sud	ENDLINE
Mme Nilomboahangy Andrianjafy	Linkages	Superviseur régional à Antsirabe	RAP
Mme Colombe Rakotonirina	Linkages	Superviseur régional à Antsirabe	ENDLINE
Mme Parson Ravaosolomampionona	Linkages	Superviseur régional à Fianarantsoa	BASICS, ENDLINE
Mr Séraphin Randrianaivo	Linkages	Superviseur régional à Antananarivo	CONTROLE, ENDLINE

List of survey interviewers per district and types of survey

District	RAP	District	Orinical Districts	District	ENDLINE
Antananarivo Nord	Mirana Rasoanirainy Handriniana Rahobizafy	Antsirabe II	Lova Andrimitantsoa Rijason Randrianantoanina	Antananarivo Nord	Mirana Rasoanirainy Handriniana Rahobizafy
			Pierrot Rodin Randriamandimby Fanjasoa Rasendraharijaona		Lova Andrimitantsoa Rijason Randrianantoanina
Antananarivo Sud	Hanitriniony Andriamisain Brian Raoelina		Bakomalala Mamisoa Razafimahefa Ida Anita Rosiane Colançon	Antananarivo Sud	Hanitriniony Andriamisain Brian Raoelina
Arivonimamo	Raymonde Rakotoarivelo Josée Ketaka Rajaona		Samiharijaona Razanamaro Vonjy Andriampitiavana		Raymonde Rakotoarivelo Dimbiniaina Razakamantsoa
	Yvette Rajamason Dimbiniaina Razakamantsoa	Fianarantsoa II	Aina Sheila Rakotmalalanirina Abel Thierman Jean Rakotozafy	Antsirabe I	Pierrot Rodin Randriamandimby Yvette Rajamason
Antsirabe I	Mbolatiana Razafimahefa Tahiry Arisotra Randrianantoanina		Hantaniaina Raharimampandra Angelot Jean Raoliarisoa		Mbolatiana Razafimahefa Tahiry Arisotra Randrianantoanina
Antsirabe II	Angelat Lalaina Rahelinirina Hoby Randrianimanana		Holiarimino Randriamorasata Yves François Razafindraibe		Samiharijaona Razanamaro Ida Anita Rosiane Colançon
Ambositra	Malalatiana Rasoarisendra Jeannie Rafenomanana		Fanjanarivo Tianarisoa Bakoly Andrianandrasana Randrianeritiana	Ambositra	Malalatiana Rasoarisendra Andrianandrasana Randrianeritiana
Ambohimahasoa	Marie Antoinette Rasoanirina Vololona Ony Ratiarisoa			Ambohimahasoa	Marie Antoinette Rasoanirina Vololona Ony Ratiarisoa
Fianarantsoa I	Clarisse Emma Mamonjjarisoa Mirana Ravosoa			Fianarantsoa I	Holiarimino Randriamorasata Herilalaina Rabemandroso
Fianarantsoa II	Francine Marie Rasoananteniana Herilalaina Rabemandroso				Hantaniaina Raharimampandra Yves François Razafindraibe
					Clarisse Emma Mamonjjarisoa Aina Sheila Rakotmalalanirina

Annex 5

The Complementary Feeding Index for Madagascar

Internationally there has been growing recognition that the complementary feeding indicator, Timely Complementary Feeding Rate (TCFR), which measures the proportion of children 6-9 months who are fed complementary food in addition to breastmilk, has limited utility due to a number of factors. One key problem in Madagascar is that of 'too early' an introduction of complementary foods prior to 6 months, a practice that is not detected by the TCFR. Thus additional complementary feeding indicators are needed to help program managers better plan and assess complementary feeding interventions, both early and late introduction, in addition to feeding frequency and dietary diversity. Arimond and Ruel¹⁵ (2003) have proposed a number of such summary measures related to children 6-23 months of age. These include a Young Child Feeding Index for children 6-23 months old and an Infant and Young Child Feeding Index for children 0-23 months of age.

Three key indicators are used to determine these indexes, which are:

- 1.) Continued breastfeeding
- 2.) Age-appropriate frequency of feeding
- 3.) Dietary diversity (food group diversity)

The following table provides details on how each component contributes to the calculation of the Madagascar YCFI, modified from what Arimond and Ruel recommended. It has also been adapted from the original to reflect the recommendation on frequency of feeding specific to Madagascar.

Components and scoring of a Madagascar Young Child Feeding Index for Children aged 6-23 months		
Components included	Scoring	
Continued breastfeeding	No = 0	
	Yes = 2	
Frequency of feeding (number of meals + snacks yesterday)	6-11 months:	12-23 months:
	None = 0	0-1 = 0
	1-2 = 1	2-4 = 1
	3+ = 2	5+ = 2
Dietary diversity (number of food groups yesterday)	Low (0-2) = 0	
	Middle (3-4) = 1	
	High (5-8) = 2	

The scoring for **continued breastfeeding** is determined by whether the child is still breastfeeding or not.

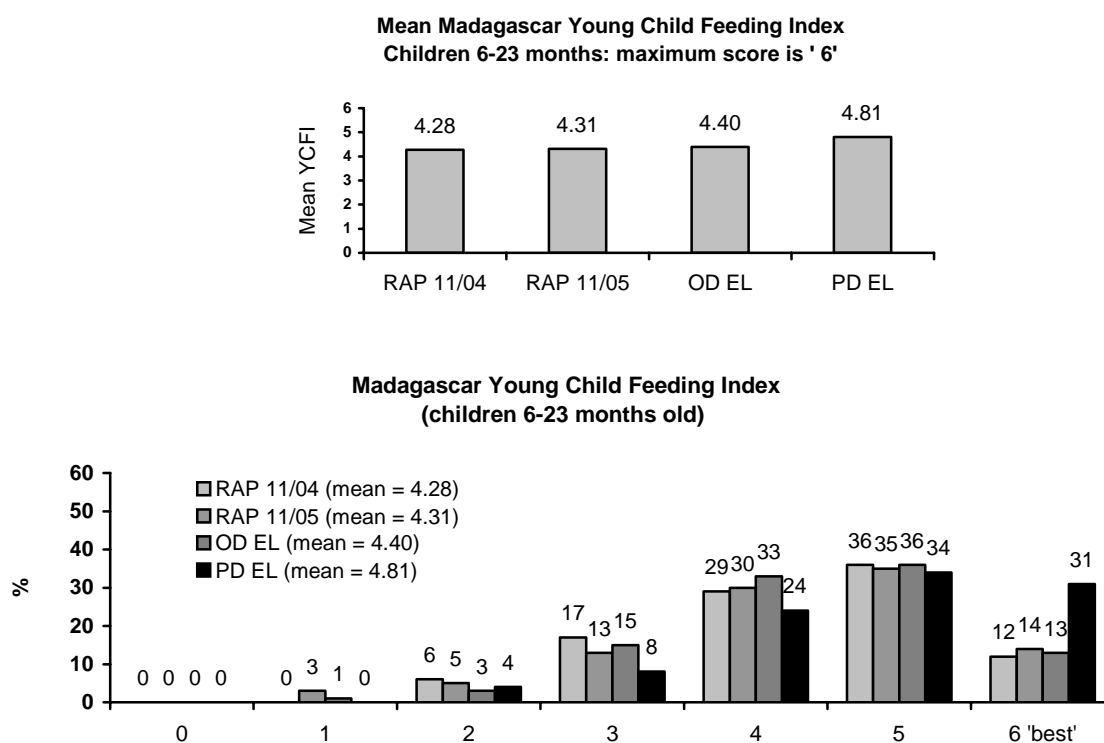
Scoring for **frequency of feeding** is based on the idea that there are varying levels of practice among mothers with a clearly recommended behavior as well as less than ideal behaviors. Feeding a 6-11 month-old infant once or twice is better than not feeding solids/semi-solids at all and is therefore given an intermediary score, while the highest score is reserved for the recommended number of feeds.

¹⁵ Arimond, M. and M. Ruel. Generating Indicators of Appropriate Feeding of Children 6 through 23 Months from the KPC 2000+, FANta Project, November 2003

In the case of **dietary diversity**, there is no specific guideline indicating an adequate or inadequate level of diversity. The following ideas guided the scoring for diversity: When children receive only one food, it is extremely likely to be a starchy staple food (grain-based or root/tuber-based). A diversity score of two allows only one additional food group, and therefore the child's diet cannot meet the guidelines, which recommend animal source foods and vitamin A-rich plant foods daily. Therefore, children eating 0-2 food groups are considered to have "low" diversity. On the other side, children eating five or more food groups in the previous day are very likely to receive a variety of nutrient-dense foods and are considered to have "high" diversity. The middle diversity group includes children eating 3-4 food groups the previous day (Arimond and Ruel 2003). The eight defined food groups are dairy, other animal sources, eggs, legumes, vitamin A rich fruits and vegetables, other fruits and vegetables, foods made from grains, tubers, and foods cooked with fats or oils.

The table above was used to assign a score for each child 6-23 months on each of the three different elements of complementary feeding. Hypothetically, the maximum score achieved by a child is '6', which has been defined as "best" feeding practices. Data from the surveys conducted in this final assessment have been analyzed according to the above algorithm and are presented in the graphs that follow. It should also be noted that certain complementary feeding variables, such as dietary diversity, were not collected during the baseline surveys hence PD BL and EL as well as OD BL and EL comparisons can not be made. However, a comparison between the RAP 04 and RAP 05 can be made, bearing in mind that the RAP 04 does not represent a baseline situation as complementary feeding messages had been promoted before this time.

Madagascar Young Child Feeding Index 6-23 months

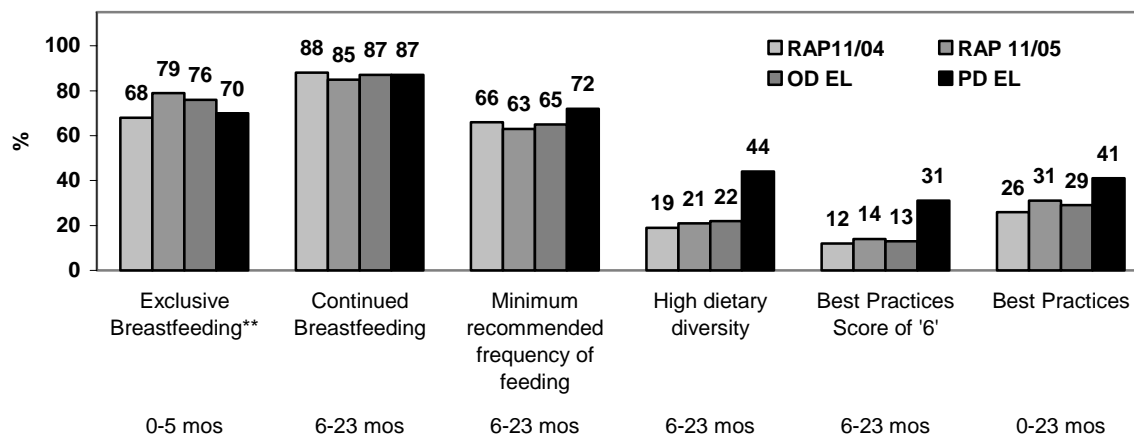


Over time, it appears that there have been some improvements in complementary feeding as defined by the Madagascar Young Child Feeding Index. However, more time is needed to see further changes. Unfortunately, the absence of baseline values means that any past improvements which may have occurred as a result of the project, but prior to the RAP 04 when dietary diversity was first included in the field assessments, are impossible to detect. Most of the children have a YCF Index in the 4 and 5 ranges, which are below the 'best' practice level of 6.

Madagascar Infant and Young Child Feeding Index 0-23 months

Looking at best practices for all children 0-23 months, with the inclusion of infants 0-5 months, there appears to be more children falling into the top category of 'best practice' due to the high levels of exclusive breastfeeding. Problems with terminating breastfeeding between 18-23 months and low food diversity account for why many fewer children 6-23 months are categorized as having 'best' practices.

Percent of infants and children fed with selected "best practices" : P-values shown
for are for the comparison between RAP 04 and RAP 05



Annex 6

Correct Feeding Indicators Proposed by USAID

MACRO, in collaboration with IFPRI and FANTA, is also working on an index to assess 'appropriate infant and young child feeding practices' that can be used to compare information across the Demographic and Health Surveys (DHS) of different countries. The use of this indicator is still being discussed, however, at the present time the current criteria are being used for breastfed children:

Criteria for Breastfed Children
Continued breastfeeding
Frequency of feeding 6-8 months old: 2+ times 9-23 months: 3+ times
Dietary diversity 3+ food groups

It should be noted that the cut-off on for feeding frequency follows the WHO Guiding Principles on the Complementary Feeding of the breastfed child and reflects the low end of the recommended feeding frequency for each age group. In Madagascar the recommendations on frequency of feeding have been set somewhat higher than the WHO Guiding Principles, as follows:

- 6-11 months old: feed 3+ times/day (as age groups before one year of age are combined)
- 12-23 months: feed 5+ times/day (as snacks are included)

In the DHS 2003-04 conducted in Madagascar, the national CFI rate is 37%. Using this same algorithm, in LINKAGES project sites, the 'appropriate young child feeding rate' is 68% in PDs and 81% in ODs.

Annex 7

Abstract on Cost Effectiveness of LINKAGES/Madagascar program

This study analyzes the cost effectiveness of an infant and young child feeding program implemented by LINKAGES (a USAID-funded cooperative agreement managed by the Academy for Educational Development) and its partners – the Ministry of Health and Jereo Salama Isika project – in Madagascar. The indicators used to measure effectiveness are: 1) exclusive breastfeeding (EBF); 2) timely initiation of breastfeeding (TBF); 3) use of Lactational Amenorrhea as a method of family planning (LAM); 4) complementary feeding (CF); 5) increased frequency of breastfeeding for sick children (FSC); and, 6) increased eating for breastfeeding women (MN). The key findings are: 1) There is a positive relationship between the costs incurred per beneficiary and the behavior change outcomes; 2) The cost of training and mass media activities are the key cost drivers; 3) The cost of replicating the package of activities to promote EBF, TIBF, and LAM is \$6.23 per targeted child, while the cost per new EBF, TIBF, and LAM acceptor are \$10.09, \$2.33 and \$4.44, respectively; 4) LINKAGES may be able to increase its cost effectiveness by selecting areas with large target populations and low rates of the targeted behaviors; and, 5) LINKAGES' program in Madagascar appears to be cost effective with an average cost per new EBF acceptor of \$10, compared with data from Ghana and Brazil showing cost per new EBF acceptor to be \$34 and \$59, respectively. Further work to study the economies of scale and scope for these types of interventions, as well as their sustainability or longevity, would be helpful to improving cost effectiveness.

Extracted from Chee, Grace, Kimberly Smith, Marty Makinen, and Zo Rambeloson. June 2004. *Cost and Effectiveness Analysis of LINKAGES' Infant and Young Child Feeding Program in Madagascar*. Bethesda, MD: Abt Associates Inc.